Year 2000 costs

Paul A Strassmann says SEC filings show U.S. firms will spend only \$508. 33



Legendary lab Can Xerox Parc regain its luster? 73



Database duality

Users wrestle with challenges of running multiple database platforms. 67

The Newsweekly for Information Technology Leaders News updates, features, forums: www.computerworld.com May 18, 1998 - Vol. 32 - No. 20 - 96 pages - \$4/Copy

The suit that wasn't - vet

The Justice Department and several states were set to file wide ranging antitrust lawsuits against Microsoft last Thursday, but didn't

> Qt Why weren't the suits filed? As After some last-minute negotiating, Mi-crosoft, the states' attorneys general and jus-tice decided to try to settle their differences. agreed not to ship Windows 98 at least until today, and the law

s to loosen the ties between gill and the Internet Explorer ster and ease restrictions that oft places on PC mais requiring them to shur ars' products I the release of Windows of

mly briefly to PC makers soft said it still plans a al launch June 25. ore on the antitrust clash see pages 24, 92 and 93.

E-commerce: Late is relative

By Sharon Machlis

WHEN BORDERS GROUP, INC. jumped in to the electroniccommerce fray last week, it was considered late. But when Musicland Corp. said it would stay out of the Web selling fromzy for now, some analysts ap-

plauded the move - even while stock in K-Tel International, Inc. rocketed almost tenfold within a month after the mail-order music company announced plans for Internet sales What gives?

"All of electronic commerce Late, page 16

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Gates, DOJ call time-out DOJ. states hold suits, start talks

By Kim S. Nosh

you couldn't cut it any closes lust hours before the U.S. Department of justice and more than a dozen states planned to file antitrust lawsuits against Microsoft Corp. last Thursday. CEO Bill Gates decided he

After eleventh-hour meeting with lawyers and fustice Depart ment officials, Gates agreed not to ship Windows of to PC mak ers. And state and federal povernment attorneys said they wouldn't file any suits while negotiations are in session Talks were expected to continue may the weekend and into this

week, if necessary. At this point Windows 96, page %

OFFSHORE LABOR Benefits can be elusive; costs

are deceptive By Julia King

IF YOU THINK YOU can save big money and consistently speed delivery by shipping year 2000 and other IT work offshore.

think again In India, programmers still are paid at least one-third less than their U.S. counterparts But higher project managem costs — because of cultural differences and high staff turnove rates - can quickly wipe out

potential savings "It's a myth that there are hordes of people just waiting to do our legacy work," said an information technology manager at a large U.S. airline that has sent work to India for the past



Users fear fallout will hurt IT plans

By April Igoobs and Kim S. Nash wasters Microsoft Corp. ends up in court fighting antitrust charges, or settles, technology managers by and large admire the company and don't want anything to interfere with their

ability to plot IT strategy. "Yeah, sure, Microsoft is a big monopoly. I curse them on a daily basis but their products give me a lot of functionality and resources I wouldn't have otherwise," said Bob Glassley. Internet and electronic data interchange administrator at Countrywide Home Loans, Inc. in Calabases Calif

Even if the government succ

Microsoft and wins, some users Customers, page 93

System crash stalls Avis

By Kim Girond

AVIS, INC. and its partners will have to try harder. Last week, a major travel reservation system crash froze Avis and travel agency bookings, leaving the provider acrambling to fix the system during the crucial pre-

Memorial Day rush. The freeze also highlighted the creakiness of parts of the travel reservation

Mike Pingrey, general manager of Act Travel in Washington. said the outage - the first major one he has seen in a Ands, name II



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me, Callf.; Oberon Soft ss.; and Conthe amount of money they red. In Cross'Worlds'



re than \$40 mill on hussle in the move to enterpribe resource planni p applications. They just might be right. The ERP tio

The problem is that no application vendor has it all.

we we heard this all before? You but. The need to n

es has been one of the driving factors behind the data

as saying middleware to detabases. They are dull, plumb-p-like stoff, but they may well become an important catego as we get past the millennium problem and start to think are about how to use all this data we've collecting. Expect or fortable in prisoner.



Year 2000 whistleblower derailed he subportized for the rest of

By Kathleen Melomake YEAR 2000 CONSULTANT Peter de laper has shut down his Project Damocles under threat of "per-

petual subpoeta." The project, launched in lanuary, was designed to highlight embedded systems problems. It encouraged corporate employ ees to blow the whistle oo year

2000 laggards. De Jager promised to pass on information - minus the sender's identification - to the offending companies in an effort to press them into action

The explicit threat was that if systems failed in 2000, de laper would furnish the original correconsidence to elementic De Jager had accepted criticisms that some reports might be specious, and he was willing to risk lawsuits over confiden tiality violations. But in the end. he said, lawyers finally convinced him that supplying information to litigants was akin

to renaming the project Subpor-

my life " he said "He had the right idea," said ten the universe with two-disti Lou Marcoccio, year 2000 analyst at Gartner Group, Inc. "But when one person starts butting heads with very large corpora

tions, it's very difficult to wan." Users working on war 2000 were

disappointed hear of Project Damocles' demise. "It's too bad progress on this project is impeded by fear of lawsuits." said Steven Mc cations manager for the Millennium

Project team at Bank Boston re to be sub During its five month existence. rest of my life." Damocles received 'hundreds, but not thousands' of reports, de lager said. He never issued any information on what he heard, perhaps be-

code, and when st comes to 'oo,' it's all going to die." Still, the responses weren' really the point, said Capers Jones, chairman of Software Productivity Re search. Inc.

Burlington, Mass "It's too bad these legal threats turned roject Damocles) off, but |de |ager| did raise the con aciousness level

One for example, came "directh

from God. He said he had writ

on embedded my De Jager said he has been pilloried by some for giving up on Damocle and he said he feet

frustrated but not guilty. "I've sacro ficed enough for this silly proj ect," he said. "Anyone who faults me needs to convince me that they're doing more than

nor 'R He "I have no during to cause many reports were trivial. Utilities' systems aren't likely to be fixed by 2000

ready by lanuary 2000

to do assessment and to do in

tor at the commission. Thoma

By Matt Hambles WASHINGTON

LUCTRIC VITATIOS PROBABLY won't be 100% mady to supply power to the nation's business es and homes on lan. 1, 2000. because of computer problems. federal officials concluded at a regressional bearing last week. In fact, the Nuclear Regulato ry Commission (NRC) will have to shut down more than 10% of the nation's nuclear plants after July 1999 because their systems won't he ready to herelic the date rollower to 2000, said Richard Cowles, year 2000 an alust at TAVA/R.W. Beck LLC. an electric utility industry con sulting firm in Penns Grove.

"I'm seeing power cor back down from their original optimistic statements (of read) ness)," Cowles said. He noted the prospect of power outages in the Mid-Atlantic and Chicago areas if a significant oumber of unificies can't operate in January 2000 because the areas lack At the hearing, held by the U.S. House Science Committes's Subcommittee on Tork

August. The NRC will then in spect a sampling of those power plants least prepared.

I've done."D

By July 1999, all nuclear plants must be ready or they may be shut down for safet ogy, U.S. Rep. Connie Morella reasons, Thompson said. He (R-Md.) expressed frustration also account the committee that with the slow pace of progress if a plant fails to operate be cause of a year aooo glitch, it and said it is clear the electric will shut itself down safely utility industry won't be 100%

Kathleen M. Hirning, chief information officer at the Feder "Why are we waiting so long al Energy Regulatory Commis spections? Morrila asked Hugh gion said that with nearly L. Thompson Jr., a deputy darec-8.000 companies distributing or generating power in the U.S son responded that the NRC and the high frequency of em had been working on the year bedded devices in computerized 2000 problem for two years plant systems, "it's difficult to say we're confident there's coand recently ordered the owners of 104 ouclear power plaots to ing to be 100% working sysfile compliance status reports by tems.**



In this issue

as Not quite the un TECHNICAL SECTIONS

- ME CHTCAPPING METWORK

- ---

- -

High-tech visa limit

▶ Senate expected to vote on upping H-1B max

By Barb Cole-Gomolski

IT YOU ARE THINKING OF filling

earmarked for this was

carlier and earlier each year

these new [professional] jobs,

nies to fill high-tech jobs

lion workers will be needed to

The H-1B is a temporary visa

that includes several profession-al categories, including physi-

cians, accountants and comput-

Employers looking for pro-

grammers and other informa-

tion technology talent have ar-

gued that the U.S. should

the labor crunch.

increase its visa ceiling to ease

Opposing that move are the

Chinton administration and the

Institute of Electrical and Electronics Engineers, Inc., which

fill new high-tech jobs

those open 15 jobs by bringing ed in past years. in foreign nationals on tempo 65,000" rary visas, you will have to wait until next year. 1997 65,000 The Immigration and Natu ralization Service (INS) last 1996 55,141 week stopped accepting applications for visas that cover highly 1995 54,178 skilled workers because it al ready has issued the 65,000

That marks the second year in a row that the limit has been mached before Sept. so, the end have argued that open jobs of the agency's fiscal year. The INS this year bit the visa ceiling should go to U.S. citizens ICW. four months earlier than last March ol

Tim Sullivan, chief informa-"This is a big problem," said tion officer at Kaiser Perma Gary Endelman, an immigranente in Oakland, Calif., raid retion attorney at Amoco Corp in cruiting foreign workers "is one Houston. Amoco used the H-1B

MAXED OUT

Sent L rec

of many avenues we use to tack le the IS skills crisis." In the program to hire workers from Holland trained in highly spenext two weeks, 46 workers from Egypt, the Philippines and cialized geophysical software. "Unless Congress raises the cap India will arrive in the U.S. to on [H-1B visas], we'll run out

begin IS jobs at Kaiser "Early indications are that "This is not unexpected given this will be a good program for that the economy has created all us," Sullivan sand of the visa The Senate is expected this

said Harris Miller, president of the Information Technology Asweek to vote on a bill that sociation of America (ITAA) in would increase the number of Arlington, Va. Still, Miller and H-1B visas from 65,000 to others said they are concerned 105,000 over the next five years. that this latest development will In addition to adding about make it even harder for compa-30,000 H-1B visas in the first year, the bill would provide 20,000 college scholarships for A lanuary study of 1.500 companies by the ITAA showed low-income students and funds that there are now about for worker retraining. A sepa-rate House bill would require 346,000 open information systems jobs. In the next decade, companies to certify that they the U.S. Department of Labor have tried to find domestic estimates that another 1.3 mil-

Los Angeles-based immigration attorney Carl Shusterman said the bill is a necessary step but insufficient. The need for people is so strong, and the number of extra visas lin the bill is so small," he said Questions also loomed last

week as to whether U.S. sanctions against India, imposed last week after that nation's nuclear bomb tests, could impact Indian nationals working here in high-tech jobs.

But a spokeswoman at the U.S. State Department said there is no indication that the residents to leave the U.S. []

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about a supply chain."

Co. that makes infant formula

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an annual 1% productivity im-

Each of Mead Johnson's prod-

in employee who handles our

oly and distribution issues.

Williams said. And the compa-

ny has started measuring starll

against other makers of con-

R/s application software

· Business managers face cultural hurdles in the way we do business Av Crase Stedman

NEW OBLEANS VENDORS ARE HAWKING SUPPLY

chain management software as the next bug thing in packaged applications. But for some companies, getting to the point where they can use the technology is a tall order

That was the message from a half-dozen husiness manageri who attended the Supply-Chain Council's second biannual conference here last week

It often usn't easy to sell different business units, let alone external suppliers, on the wasdom of banding together to manage the flow of raw maters als and finished goods, they said. And the need to bridge dif ferent cultures and business practices makes implementa-

tion even more complicated "For us, it was a total change

sumer packaged goods on met nes from continue delivery to customers. But the changes resaid Joe Williams, director of quired 'total buy-in from serior global productivity at Mead management," he said

Johnson Nutritionals in Evans-Avenor, Inc. a Montreal ville. Ind. "We talked with probased newsprint maker, began ple un our [business] units, and stepping gingerly down the many times it was the first dissupply-chain path six months ago in an effort to get suppliers custion those purs ever had and customers to work sorntly to Mead Johnson, a \$1.9 billion cut inventories, transportation division of Bristol-Mvers Squibb costs and other expenses.

and other products, is making a TRUST IS AN ISSUE

"This is rocket science," said Karl Roberts, vice president of un with corporate mandates for supply-chain management at provement. It also is granne up Avenor. 'The way traditional for a July rollout of SAP AG's businesses work, no one trusts anyone. Unless you can convince them that you both can uct development teams now has benefit (from this), it's a pretty one-sided discussion."

Short of a merger, shaving supply and distribution costs or Aurona's only real notion for improving productivity, Roberts

PULLING THE CHAIN

Issues driving interest in supply-chain management include: Demands for faster delivery of customized products

- s Need to provide extra services to some customers
- I Corporate initiatives aimed at improving on-time delivery
 - # Mandates to reduce costs to get more aggressive on

said. But the company is hold hopes will become a con starting point for building and ing off on busing supply-chair software until it sees if enough evaluating supply and delivery suppliers will go along to make Greg Girard, an analyst at Advanced Manufacturing Re

But even Tom Brunell, a council board member and vice president of materials manage search, Inc. in Boston, agreed ment at Aynet, Inc. in Great that setting business units or Neck, N.Y., said the biggest ng partners in line is no challenge of putting together a small task. "But it's also ursupply chain "is getting people gent," he said. "Your competito see things in a new light. "O tors are doing it, and customers



Windows to get new 3-D tool

MICROSOFT CORE WARTS INCRES TO

stee into a 4-D world to navigate the Web and their desktoos The company plans to use its new Chrome technology, a three-dimensional rendering and interactive media tool, in

future versions of Windows of and Windows NT. Microsoft officuls said they hope the added dimension will change the way people access inemation on their PCs. The technology will appear in Windows q8 late this year or early nest war and in the next weepon of

Windows NT, also due out next year Chrome will start out how a 3-D inte out as a tool to help developers

build 1-D images Windows applications. In time, it will become part of the interface and give users a D promissions of file structures and the relationships amou World Wide Web pages and ob jects on a network. Microsoft

eers said. "This will be the very begin ng of Microsoft's vision of the ture of the interface," said manager. "Instead of rust sharing information as raw text. people will be able to soun it. look at it from different ancies and access it more easily Chrome will be front and center in the way people navigate [Windows] in a couple of years."

Users are solit on whether the interface change would make Windows applications more useful or simply add fat

to an already shargish client. Danita Swinton. a network adminintrator at PMA Reinsurance Corp.

Philadelphia, said she hones a t-D interface could Perry: "I have grave make her meet more productive "If it's organized and looks good, it

Red Storm's Kevin

inulties figuring

could make a sob easier," she said. "Now users have to go into different folders to get a program. That could be eliminated But Swinton wornes about mey - such as applications that could run on one system but not another - and users who might have to use

both the old and new systems.

Chrome product manager

Leslie Evans said the technology

esigned to let users see a 1-D cube with information on rotating sides instead of clicking through pages of text. And menu information could be found on a rotating cube so a user wouldn't have to pull down menus looking for information. Chrome also could make it easier for users to represent 6 nancial or other data in +D. as

they do in spreadsheets and graphics programs. Chrome will need a Pentium II vso-MHz machine or better to run. Some users said that could mean more hardware uperades.

WHAT'S THE BENEFIT? "I have grave difficulties figur ing out how a a-D interface would help me," said Kevan Per-

ry, a producer at Red Storm Entertainment, Inc. in Research Triangle Park, N.C. "How would that make people spore productive? And I'd like the new processor technology to take me forward, not keep me in the same spot speedwise because this is taking up my power The idea sounds "cool," sax Kent Polzin, director of applica tions and system support at San mons Co. in Atlanta. "But I've got a clerk who needs to enter an order in a system. He has

enough distractions. Why does

he need this?" Polain asked, D.

Cabletron discounts prices via Web site

prices for networking gear tend to give customers a bad case of sticker shock. So the vendor last week began publishing dis counted product prices on its Industry analysts said the Rochestez, N.H., vendor's list prices are as much as so% hugher than those of rivals, resulting in rankled users and lost

the investment worthwhile.

are demanding it."

business ICW, April 61 DUTANDS IN SAVING

Cabletron has responded by posting the list price and a discounted price that users get when they make purchases via the communy's World Wide Web site. The online discount can amount to thousands of dollars depending on the product

We're making this move pri marily to capture new busin as that's where the real challenge is," said Wade Appelman senior director of product man agement and marketing. "Current customers can use the site but the majority have already tiated attractive discoun off our list pricing."

Cabletron receives 80% of its revenue from repeat customers and wants to drive down that

percentage by landing new Citicorn's John Pfeffer predicted users will welcome the public listing of discounted nces. This will show potential Cabletron customers that they can get a better price than list," said Pfeffer, senior LAN engi neer at Citicorn in New York.

which already has worked out a volume discount plan with the

The discounted price may not be the best price they can get a product for but it gets the customer interested and keeps Cabletron in the race," he said. One analyst said the move will have marketing and cost benefits. "Cabletron's strategy here is to eliminate the percention that they are the high-price provider of networking products," said John Morency, vice president at Renaissance Worldwide, Inc., a consulting and research firm in Newton, Mass, D

targety by price. Page 50

"How did we put Spain's Railroad on the Information Super Highway?

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ClOs worry year 2000 bill may cause slacking

▶ Litigation costs spur limited-liability bill

MANY CHIEF information officees say they are skeptical about mal year 2000 legislation that would put dollar restrictions on date-related lawsuits. It isn't so much that users fear vendors will be let off the hook by limited-liability legislation. Their concern is that other technology customers who haven't done due diligence in acking the problem will get a free ride. Blanket protection suldn't be fair to those of us who have already invested so much in remediation," said Koeman T. Spendelits, managing director of global technology at

CIBC Oppenheimer, a New For example limited-liability legislation "might be a disincentive" for automakers and other companies to do their best to fix problem systems, said Harris Miller, president of the Information Technology Association of America, an Arlington, Va-based software and services

industry trade group

Nearly everyone agrees that stres should be taken to pervent opportunistic lawyers from try-drafted a proposal, he pitched ing to cash in on the problem with frivolous lawsuits. Some experts

have suggested that year 2000related litigation could reach \$0 trillion, or nearly more the estimat. ed cost for U.S. businesses and

government agen ces to fix the problem. "It's unbelievable Every one is trying to figure out how they can sue the next guy," said William Bautz. chief technology officer at the New York Stock Ft.

A similar but unrelated bill was derailed, at least temporards, in the California Assembly two weeks ago CW, May 12l. Now, U.S. Rep.

ering feedback from industry groups and legislators in an effact to formulate a national ref erendum. Although Dreier hasn't vet

on his World Wide Web site (sname/house.gov/ dreier) a two pronged bill that would 'recour. coimputer

vendors to provide no-cost year anno figes to cue toeners in exchange for receiv

ing limited legal liability. That would fly in the face of David Dreier (R-Calif.) is eath- recent complaints by software prevent, say, airlines from work

customers that some vendors are charging 5% to 15% premiums for so-called year 2000compliant software they had originally promised to fix for free (see related story below).

And it is unlikely that technolo

gy vendors would agree to fix customer systems for free in ex change for liability limits, particularly because most thirdparty software is heavily cus tomized and would require hundreds of thousands of tech nician hours to renair "You can't just send some

> it in It's just no going to work," said president of informa ion technology at the National Retail Feder ation, a Washingtonbased umbrella trade

The other piece of legislation that Dreier pitched would seek to ensure that engine antimust laws don't

ing together on year 2000 is sues to minimize disruption to turnaleer Dreser hasn't set a date for

stroducing either bill Legal experts and industry executives are solit on the likelshood of so-called safe-harbor hability legislation being passed

The action probably would be heavily lobbsed, which could delay a congressional vote.

There are fewer than 600 days before the big deadline. One suggestion is to permit lawsuits that let plaintiffs suc for direct damages, say in the event of a malfunctioning heart body a patch and plug monitor, but prohibit punitive damages where malicious musconduct doesn't apply, said leff Jinnett, head of the year 2000 practice group at LeBoeuf, amb, Greene & MacRae in New York

Even if national year 2000 liability legislation is passed, said Graham Albutt, CIO at Reuters America Holdings, Inc. in New York, "the lawyers are still going to jump all over" year

. and face unexpected fees for compliant apps

Vendors up fees; users consider legal action

By Thomas Hoffman react to the price hike, which he

A GROWING rumber of software vendors who once promised customers free upgrades to year 2000-compliant versions of their products are pulling a baitand-wortch.

Needless to say, chief inforation officers aren't hape about having to pay more for year 2000-ready software, and many are considering legal actions against suppliers "I'm already paying 15% maintenance fees on these

licenses, so these fixes should be covered," said Kosmas T. Spiridellis', managing director of global technology at CIBC Doornheimer, an investment bank in New York.

CIBC has run into a couple of snarls with client/server back-office software vendors to whom they pay annual software fees of \$400,000 per year and

ndellis said those vendors are "feeling out" CIBC to see how the investment bank will

said is to % to 15% above its base costs. "I hope it doesn't go to litigation, but that's where it's heading," Spiridellis said. According to new research. which Gartner Group, Inc.

plans to publish next month. less than 1% of the industry's software vendors were charging customers for year apporteady upgrades last year. Today, ag% of vendors charge fees for year 2000-compliant software, according to the consultancy.

In some cases, vendoes are

coming to grips with how much time and expense it is costing them to make their software year 2000-compliant. In other cases, "some vendors are realizung that thus is an opportunity to make money, even if clients are already paying mainte nance" on their software, said

Stephanie Moore an analyst at Gigs Information Group in ridge, Mass

tion. One Novell, Inc. customer said it was being overcharged for year appo-compliant ver tions of software that it had been told would be delivered for

But John Canfield, Novell's year

2000 director, said patches to its software are available free on the vendor's World Wide Web Some vendoes are adding

nest-generation functionality to year 2000-compliant software to help justify the price increases. But customers simply want the same software they were uning, only date-ready, said Lou-Marcoccio, an analyst at Gartner in Stamford, Conn. "We're seeing more and more discourse

ments that could lead to legal cases," he said. One stockbeoker managed to avoid higher licensing fees by reaching a compromise with its back-office software supplier.

Instead of paying more mon ex, the CIO and CEO at Great Falls, Most-based D. A. David son & Co. agreed to attend quarterly executive steering committee meetings for the software vendor, said company CIO Donn Lassila. The arrangement "has worked out very mell * be enid

Not everyone is feeling the pench, at least no more than usual. "Our policy administra- in Madison, Wis. O

tion [software] vendor always has its hand in our pocket, but they haven't charged us additionally for fixes they made to the software nearly a year ago," said Troy Lethern, director of information technology at Nation al Guardian Life Insurance Co.

Gerstner plugs services

By Jaiksmar Vijayan

driver of growth at IBM, the company's chairman said last merk Louis V. Gerstner last week told Wall Street analysts that services should send IBM's

growth into double-digit per-Services account for more than one-quarter of IBM's \$75 billion in revenue, he said, IBM has \$44 billion in backlog ser-

vice orders, a sign of future strength, Gerstner said. He said IRM faces strong competition from Unix and

Windows NT vendors, IBM also lags behind Compaq Computer seavices will be the biggest Corp. in the market for PC

servers running NT and must catch up. Gerstner suid He said other IRM business lines, such as high-end storage components and software, also will contribute growth during

the next few years. But currency fluctu weak Asian markets and PC price cuts will put strong poes sure on the bottom line. Gerstner said. IBM's 6% revenue growth last quarter - to \$17.6

billion - was lower than Wall Street's prediction of 8%, analysts said D

The 1998 World Cup Socces Tournament is one of the largest media events of all time, with a cumulative television audience of billions. Not to mention 25 million spectations, 17,000 volunteers and 17,000 media importations, 17,000 volunteers and 17,000 media importations, 17,000 volunteers and up-to-the minute information about everything from results to schodules to disclass. Like any bringers, the World Cup also has accounting, human resources, security and e-commerce needs. And Sybaes software is behind it all.

With a Web site (www.frence98.com) that may be the most visited in history, capable of handling more than 100 million hits a day, and providing everything from statistics to souvenir sales. So if we can do all that, surely we can leep your company's information systems in top shape.

To learn more about the technology used to make the World Cup a success, and to find out about our World Cup information Anywhere Enterprise Solutions sout, visit www.uybase.com/events or call 1-800-8-SYBASE (Ref. CPCW).



COLUMN IS NOT THE PERSON AND ADDRESS OF THE PERSON.

Users: SBC/Ameritech merger may reduce costs

THE LATEST MEGAMERGER of two Baby Bells stands to reduce voice and data costs and streamline local services over a larger territory, corporate customers said Last week's proposed \$56 hillion

San Antonio and Ameritech Corp. in Telecommunications Reform Act of Chicago is cretain to draw scrutiny from Congress and the Federal Communica tions Commission, analysts said Analysts believe regulators will worry

1006. The deal for Ameritech follows one year after SBC took over Pacific Yelesis Group in San Francisco. Bell Atlants Corp. merged with Namex Corp. in 1996 that the merger, atop other recent deals But six network managers (including

proposed company, to be called SBCI said they welcomed the prospect of a larger local company with shared

One carrier covering more territory -12 states, including parts of the West and Midwest - could potentially handle all the waice and data network needs of a

company's branch offices, they said If the SBC and Ameritech merse passes regulatory muster, the combined company intends to offer local, and eventually long-distance, voice and data service in 30 large cities, including some outside its territory. That could foece local and lone-distance competitors to reduce prices, further benefiting coromers, said Jeffrey Kagan, an analyst at Kagan Telecom Associates

im Atlanta "I myself hated to see the breakup of AT&T in 1984 because it was one-stop shooping for services, and now you have to carry around the extra bassage of multiple carriers and different services." said Bob Schaff, network administrator at Kootenai Medical Center in Coeur

D'Alene, Idaho. Analysts and network managers said the merger won't aid local competition unless the FCC can open local markets

"I myself hated to see the breakup of AT&T because it was one-stop shopping for services." - Bob Schaff. Kontenai Medical Center

Competition at the local level will make a difference, they said. Alan Boze man, manager of networks at Carausta Industries, Inc. in Autell, Ga., said MCI Communications, Inc. in Washington has offered the paper recycling company a 7% reduction in local service rates for services he now gets from BellSouth Corp. in Atlanta.

Customer service also is an issue "Larger is better, because I think you get better overall support," said Charles Miller, network administrator at ITT Flygt Corp., a submersible pump manu facturer in Trumbull, Conn. Miller said it is almost comical watching a carrier's service technician try to fix an outage as the technician tries not to touch the hardware of another carrier.

"You want to grah the [tools] and do it yourself. If we had one player, nobe would question who owns the wires, he said

tions mergers are probable. SBC is likely to merge with Denver-based US West unications, Inc. and Bell Atlantic with BellSouth. And some foreign carriers also may enter the merger fram analysts said. []



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The market? Hah!

FRANK HAYES

W NY DON'T WE just let the market decide?

That's been Microsoft's battle cry over the past few mounts, as the lawsuffs and legal threats against the company have piled

ever higher.

And it's a reasonable question, in a
week when Sun Microsystems has added
new charges in its suit
against Microsoft and
both the Justice De-

partment and a denem states are branching new antitrust lawsum against the software glant. How about we let Microsoft and its competitors slug it out in the market-place? So far, the Internet bartle alone size with the size of the siz

competition take its course and just

enjoy the benefits of the free market?

The short answer is that "the free market" isn't very good at enforcing the

market' isn't very good at emforcing the law. And utterly unfettered, free-wheeling competition is downright lowry at it. Face it — when someone steals your laptop, you don't "lesve it to the market to decide"

whether you should ever get it back. When somebody hotwires your car, you don't let the market determine

How about we let Microsoft and its competitors slug it out?

whether you'll ever see it again.

Customers love a bargain, which is why low-priced stolen goods will always be popular. That's also why it will always take more than market forces to deter thieves. When your car or laptop

is ripped off, you don't consult an econ-

omit — you call a cop.

In the IT world, nobody knows that
better than Microsoft, the most active
pursues of software piracy in the industry. 'The market' isn't big on enforcing
copyright laws, so Microsoft goes after
both wendors and user companies that
make illegal copies of Microsoft prodmake illegal copies of Microsoft prod-

ucts, and it pursues them with a vengeance.

Microsoft jealously guards its trademarks, too — sending lowyers after vendoes who misuse Microsoft's "Windows computable" logo or other intellectual property, let the market decide? Don't be riddiculous. Sending in the cops and lawyers is exactly the right thing to do because — to put at blundly—the mar-

ket doesn't care

I love letting the market do its thing. I enjoy watching a good knockdown, drag-out marketplace fight that forces wendors to beef up their offerings, reach for new approaches and rethink

But when laws are broken — whether they're copyright, trademark or antitrust laws — it's time for the law to step in. And that's true whether the scene of the crime is some close shop in San 600

Jose, Calif., a corporate office full of pirated spreadsheet toftware in New York or a big software company in Red-

mond, Wash.
Has Microsoft broken the law? Yes, says one judge; probably, says another.
Taken together, those two legal opinions guarantee Microsoft will spend years in court—with a strong chance that judges and justice Department attorners will be looking over its corporate

shoulder for a long time. Ironically, there's an easy way out. If Gates decides that, starting now, Microsoft will demolish its rivals solely by selling the best products in the world, Microsoft's legal problems would vanish

That means no more tying products threatening sensions or bracking contracts. Using clean, unassatisbly legal comportion, Microsoff probably would still win almost every marketylace battie. Customers would have more and better choices. Best of all, government lawyers would have to find something else to do with their time.

But that had better happen soon or it won't be the market that decides anything. It'll be the jury.

Hayes is Computerworld's staff columnist. His Internet address is frank_hayes &concorn.

Security bug hits 3Com switch

Com Cope, efficiels and a success has in some of the reasonary season populor enthrest the mendantined remote some gain access to the noticities using special jugies. The Condition Superfixed in Suttice can be lacked — passender and configurations can be locked — passender and configurations can be locked. — passender and configurations can changed—subject by habitors and definition passender, forget their passened and when they need to obtain the control of the control of the control of the method in the control of the control of the published but read on an inherent chart site. Officials and of plant in the control of the control of the control plant in the control of the control of the control plant in the control of the contro

Hitachi fires mainframe salvo

Responding to 1884; recent basech of our mainframe systems, viral Histolia Onto Systems Copy, but went options, viral Histolia Onto Systems Copy, but went feature faster [10] processors, mounter calculate fasportion and guester capacity. The over-systems, each of which can support up to 19 partitions, have up to 26, bytes of processors storage and support 1884? Partiell Syspies calculating technology. The systems will start shipping in Supiansher. Pricing for the systems want to mainlaid.

Microsoft wins round in court

Microsoft Corp. challed up one small victory but week. A federal appeals court said a December injunction applient abliquity Windows 59 bundled with the internat Employer World Wife this browner didn't natural to the Windows 50 specifieg systems. A three-judge panel issued the ralleg in response to a request bilinosels field two weeks ago. (See pages 24, 56 and 55 for rallated stories.)

S H O R T S

Son Microspetanes, Inc. natural a Sederal Judge to make some the Jewn in Windows all compilies with Startspecifications. Son amended an October Nevrolt that charges Microsoft with richting its license to use Sort's Jewn programming language, Son zaid the Changes Microsoft mote in Jewn for Windows plan or located with the providence of the called the mane a publicity start.

FTC hosts privacy site

The U.S. Federal Trade Commission has created a Web the journamentaged as part of an effect to present conspisate from accessing personal information over the internet utilized personal information over the internet utilized personal information and links, the site covers credit rectivity, driver's license data and seasons and oddresses coulde from other credit and and selectorised personal and selectorised the Vibra Heast has told provenment agencia to review printerp protections.

Bill would restrict 'net taxes

The House Commerce Committee variationally advanted the Internet The Finadon Act, which probables new state and local trans on Web-based communical transactions for at least sity years. Under the research, which stall neads Houses approved, purchases made vie to the 'rat card. The texts any differently then shaphone or mail orders. The sct also probables state and federal tones and regulation of histories access prices.

Pro-encryption bill introduced Sensions John Ashoult (R-Ma.) and Patrick J. Lealy

(D-VL) lost week introduced an anapytion bill that lays

out a pro-princy approach to compute security. The bill, the E-Privary Act, alons to protect the domentic was of strong encryption without government exventingping. It also would ease export control to let U.S. companies sell their encryption products oversees. Current laws prohibit the export of high-level, 145-bit key encryption abroad.

Apple reverses Rhapsody plans

In a reversal of its 17-month-old "save the platform" strategy, Apple Computes, Inc., dropped plans for mal-ing Bhapeoph file follows operating system for its computers, instead, the Cupertine, Calif.-based company will mente it in current Mac CS & Adding features to improve stability and performance. Mac CS x bloods big last near year, instead CS S valley features to

intuit sued over year 2000

A New York law from has filled a class-action leavant apparent tables, incoming it of inhelitor passware presentes beam by falling to sense that annow various received in the control of the control of

SHORT TAKE Xerex Corp. is ming Hewlett-Peckard Co. over a printer patent claim. Some of HP's thermal ink-jet printers stre Xerex technology, the Rochester, N.X-based company alleged in its suit, which seeks a personnent injunction against HP.

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Users don't heed Oracle's call

▶ It will take a compelling business impact to switch to Oracle8, users say ing it is still a trickle. By Randy Wester

Information technology per A TEAR AFTER Oracle Corp. launched its Oracle8 database

sonnel now face so many proects that deciding to move to aystem, the rush of users adopt. Oracle8 is hard unless a magra-

Buta analysis added to Release 11

ch is hardy done in integrating of th its applications. SAP AG is both solute for its BJy politones, and M you and Pospheloft, Inc. in Pleas we and Pospheloft, Inc. in Pleas

ner and Posphelist, No. in Pleasanten, Call, have also date analysis more thin year. In equivalently find to packaged software "a something our waster very builty," and Ounch more loss Shapeau, discher remainer systems at 16 Wahry Coware, 2 San Basson, Call-farming comparative that solls finds and offers to exper-me and fined-orient companion.

wouldn't disclose pricing on its now Business from (BSS) application. BSS includes an production lysis functions and in built on top of the Bu MC, company's Express multidimensional databa-and researche tools.

tion would clearly impact the business, said Hugh Allan,

manager of information technology at Dunion Tire Co. in Amherst, N.Y. Internet applications, upgrades to systems, an plications and networks all take time and effort but have roots. ing to do with magratung to Ora-

cle8, he said Fren Oracle officials agree the pressing business needs to migrate have yet to materialize. "Unless you're designing a specific application to take advantage of Oracle8, you don't need it." said Oracle President

Ray Lane (see story bottom right). "Another thing is that until a month are, we were still shipping Oracle 7.3 to new customers. Don't ask me why. We stopped that."

Although many users admire the enhancements in Oracle8, even beta testers of the product are postponing their migration plans until the product is more mature and offers applications that use its new features. For example, pharmaceutical

grant Merck & Co. kept its betatest project of OracleS limited to a laboratory test. Sam Strum, senior systems associate at the Whitehouse Station, N.L. company's manufacturing division. said his office wanted to get up to ensed quickly on the replica-

Enhancements to Oracle8 database: Advanced systems management and backup capabilities

· Parallel query and other data warehousing features . Distributed transactions and advenced replication . Support for Oracle's Network Computing Architecture

Advanced queuing

Partitioning, object orientation, parallel server and advanced networking options

11 launched today, require tion features in the database. But Merck is still several users to upgrade to an Oracle8 months away from actually im database. plementing Oracle8 Subaru of America, Inc.'s mi "We don't want to be bleed

gration may take more than 18 ing edge: we want to be leading months, even though it wanted edge," Strum said, "And! we to move sooner to Oracle8. Al

are trying to stabilize our Oracle Capuano, project manager of business information systems, said Subaru wanted a new order entry system to nin the latest Merck has 35 Oracle databas application software and data running releases that range base. But Oracle sáid Subaru from Version 6 to Version 7.3. would have to simultaneously upgrade the rest of its financial March wants all the databases to applications, Subaru, which had

just rolled out the financial ap-

plications on Oracle 7.4, wasn't Forrester Research, Inc. in prepared to move so quickly Cambridge, Mass., said Merck's "I don't see [an upgrade] hap approach is typical of most pening for another two years now," Capuano said. "We have communies. He also said database migrations generally take to keep everything uniform -18 to 22 months. He expects the that's the information we are getting back from Oracle. They migration to Oracle8 to pick up this year as applications, such are not going to support two ar as Oracle Applications Version

Q&A: Ray Lane

environment in general."

be on Version 7.3 before anyone

Stan Dolberg, an analyst at

is upgraded, Strum said.

GETTING TOGETHER

Ray Lane, Oracle's president, spoke with Computerworld reporters Oracle Stadmen and Randy Westen at last need's International Oracle Users Group-American conference in Orlando.

On Cracle's reversal of a 1997 sales for reorganization that added product ope-cialists and vertical market teams:

last year, but if more than one prod was involved, we might have as many as five people on a sales call. What we thought we were doing was special: But the whole thing was too comple and we just decided to undo it."

On how long Larry Ellison will stay di involved in naming Oracle's applicati division, a task he took on several re-age after sales fell below expectation

Lane: "I think he'll stick with it for a year, and we'll see how it's working at that point. Larry is a very focused person, and if you direct his focus at something long mough, he'll make it a win-ner. But if he just goes in, hands them a plan and then backs out, it would get d

On Oracle's plan to sell Release 11 of its applications suite only in this client made:

only be [released in a full client/server version] if we were forced to. We might be, but so far we haven't sensed any desire for companies to run the software on smart clients, 'o

IBM expands DB2 database universe

By Jaikumar Vijayan

IBM IS CONTINUING Its bid to osition its DB2 relational database management engine from traditional mainframe decition-support roles to electronic business, enterprise resource planning and data warehouse applications.

The company last week introduced DBs Universal Database (UDB) for OS/390, which lets companies securely link corpo-rate information — test, images, audio and video — to the World Wide Web.

Those links are crucial for tempenies that plan to hos large electronic-commerce applications, said Ronnie Carapre so, vice president of technology tions at First Data Corp. in

Hackenstek, N.I. First Data helped the Internal Levenue Service build an electronic payment system for cor-

other federal taxes. The system has been fully operational since October 1996 and in its first year processed more than \$575 billion in tax payments from more than 1 mil lion corporations.

SOLID FOUNDATION

*DB2 was a foundation product

for the project, so anything that enhances the product's

E-commerce abilities is crucial for us," Carapreso said. DB2 for MVS. OS/590 and Unix environments has long been a core relational database engine in corporate environ-

ments - with installations in each of the Fortune 100 firms. according to IBM. In the past two years, the company has added online transaction proing (OLTP) and data ware house and electronic-commerce

*DBa is industrial-strength and has always enjoyed a reputation for reliability. UDB brings to it all the bells and whistles needed" to make it a player in the other environments, too. said Casey Young, president of the International DB2 User For instance, UDB's number

for Java Database Connectivity means developers can build Web pages and Java applications that directly access DB2 data Similarly, the integration of IBM's Net Data with DB2 lets corporations connect to DB2 from any browser on any plat-

IBM also has integrated data ining and data analysis tools such as its Intelligent Miner and Decision Server products, and has roped in partners such as Arbor Software, Inc. to strengthen DBa's OETP and





Lane: "We're making a big bet on [network computing]. If wo

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Dell signs on support veterans

· Company becomes contact for expanded services from Wang, Unisys

ST FOR PROVIDERS

their past reputations (as hard-

ware vendors). A high-marquis

expired May 1, officials said SATHER THAN SUY OF build & PC Analysts last week said they service capability of its own. presed Dell's alliance with Dell Computer Corp. has signed Wang and Unisys as good up Wane Global and Unisvs news for users and all three Corp. to support its corporate

omers worldwide. The agreements, announced last week, expand Dell's service offerings beyond traditional service. Until now. Dell had break/fix contracts to include contracted with multiple local network management, help desk support and other services. its customers

Wang and Unisys, which topether have about 15,000 technicians worldwide, will furnish the services, but Dell will act as users' single point of contact. Corporate customers account for about 70% of Dell's \$10 biltion in sales

Prior to rival Compaq Computer Corp.'s \$9 billion purchase of Digital Equipment Corp. in January. Digital was among the vendors servicing

Dell accounts. Those contracts deal like this one will be very good for that," said Elena

Christopher, sn analyst st Dataquest Inc. in Lowell, Mass. Unisys, in particular, "has had to overcome the buggage of libs! corporate name." For users, the agreement Dean Davison, an analyst at means access to more services Meta Group, Inc. in Stamford, and more consistent customer

This agreement will allow them to get a foot in the door service providers on behalf of and an opportunity to establish relationships with customers where they don't have them,"

And Unisys and Wang have Officials said under terms of both had an uphill struggle es the deal, Wang will handle the bulk of Dell's federal governtablishing themselves in users minds at service companies, so ment customers. That will leave s worldwide contract with \$12 Unisys to focus on multibillion Dell is a major boost, annational corporate account Customers throughout Asia will Wang and Unises have both he serviced by both providers. been challenged to overcome Unisys will service corporate

users in Australia and New

E-commerce: Late is relative

alvete said

right now is so turbulent. It's hard to determine when is the nght time," said Erica Rugulbes, an analyst at Gura Information Group in Cambridge. Mass. 'It's different depending what industry you're in.

BIG DIFFERENCE There is a huge dispurity among markets. In music, the online leader had \$26.4 million in sales last year, according to estimates from hunter Commu nscattons, Inc. in New York Seattle-based book seller Ama zon.com, Inc. had \$147.8 mil Sinn in cales

"Borders' entry is unequivocally late compared to Amazon and Barnes & Noble," said Kate Delhagen, an analyst at Forrester Research, Inc. in Cambridge, Mass. "But I phsolutely think there's room for them in the market, particularly given their real-world brand pres

Borders launched its World Wide Web site with about 1 mil-

bon titles Musicland's chairman last week told shareholders that the company is holding off on selfing music over the Internet un til it becomes more profitable The Minnetonka, Minn., company is the leading music and ndeo retailer in the U.S.

names have that advantage s fairly sensible sporoach."

They can stand back s little bit and wait for someone else to get bloody," Rugullies said. "It's *One of the erest issues of 1998 is whether Borders can be

everybody else." Newcomers should offer something better and different.

not just comparable, experts The established brand said. For example, the Borders ste doesn't sell just books, but also integrates music and video offerings, said Scott Wilder. director of online services st Borders Online, Inc. in Ann Arbor, Mich. Such an offering was complex and bad been in the

BETTER LATE THAN... If you're take setting into an E-commorce market:

- · Plan to spend liberally on marketing and advertising
- . Offer something new that the competition doesn't have Consider outsourcing if you don't have technical capabilities

successful" poline, said Vernon Keenan, an analyst st Zona Research, Inc. in Redwood City.

If the company does well, "it

laggards," Keenan said LATE TO THE SHOW?

What can companies do if they are late? "Money's the name of the game," Keenan said, because it's expensive to promot s new brand name on the Web if there are already clear market

"Buyers limit their choices," said Ray Satterthwaite, an snalyst at Gartner Group, Inc. in Stamford, Coon. "That's who there's Coke and Pepsi and

works since late 1996 By watching its competitors Borders concluded that # needed nems available for ouick shipment, so the project inwill be very heartening for other cluded the construction of s fulfillment center with to miles of shelving. The company is seeking feedback on its site and

plans s site relaunch and grand opening sometime this sum-"When you're fashionably late to s market, you can learn s lot," Wilder said. "We still believe now is also the right time

to be here." Cl The Wall Street Journal Web site nears profitate OUTSOURCING INDEX

- > Spends \$1,866, or one of every five IT dollars, on
- outsourcing ► Manages more than 100 fT vendor relationships
- > Spends less than 2% of staff time managing vendors Spends less than 5% of management time managing

Offshore labor may cost you CONTINUED FROM PAGE 1

two years, "India, like anywhere else, has ambitious programmers who want to do other things than war appn work."

he said Major savines in labor costs also amounted to little more than "wishful thinking" on the airline's part, he said

"We had projected \$18 to \$22 per hour for programmer labor costs," compared with \$30 to \$55 per hour for U.S. program mers. "But there's a lot more in volved than per-hour costs," he

said. Once the airline added in project management costs, it quickly learned that "there are no immediate cost benefits," he WORLDWIDE COMPETITION

student population (90,000 college students in total) is studyine computine and engineering. But many of those graduates will be shoorbed by Ireland's own economy. But after the U.S., Ireland is the largest ex porter of software worldwide, so connection for skilled workers can be as intense there as it is in the U.S.

Last year, for example, software engineers' salaries in Ireland ranged between \$25,000 and just under \$50,000 annually, according to the Irish Nation-

al Software Directorate. In the U.S., programmer/ analysts' salaries ranged between \$41,078 and \$42,270. sccording to Computerworld's 1997 Annual Salary Survey |CW. September, 1997|

Competition is equally fierce in the Philippines, which produces more than 17,000 computer science oradizates annually. But it loses as many as 30% to 40% of those new workers to companies in the U.S. and Sin-

There siso are obstacles to offsheer outsourcing.

Inadequate project manage

tions breakdowns are sme

the most challenging, said IT managers involved in offshore "The concept of 'as soon as oossible' means something very

different is one miles from here," said Roger Gaunt, an IT manager at Sprint Corp in Westwood, Kan, and a panelist at an outsourcing conference last week in San Diego "We learned that you have to

name a very specific time," he explained Gaunt, who was involved with two offshore projects in India, said he learned early on that "assuming that offshore staff will volunteer information when there are unresolved

problems is not wise and has to treland, 60% of the college major project implications In one case, user testing failed even after an elaborate system check had been conduct ed by the offshore IT staff. When a Sprint IT director turned to the vendor and said. "I thought you told me you testthe vendor responded that he had. But he added that

the IT director had never asked bim whether the test had been successful -

Still, there are advantages to offshore amerits One unexpected benefit Gaunt realized on one India project is that it took 40% less

time to complete "Because of the 10 1/s hours' time difference [between India and the U.S. East Coast), we could do specifications work onshore, and it would be coded offshore that night and sent back to us the next morning. he said. "We cut a tremendous ount of time from the proj ect life cycle. That was an unexpected outcome."D

Computer outage bumps Avis customers

CONTINUED FROM PAGE 1

decade - hurt business Losses attributed to the failure can be estimated only in overtime paid, potential business missed and compromised mer service, not unlike the recent

AT&T Corp. frame-relay outage, which brought many corporate networks and their businesses to a halt "You do lose money," said Pingrey whose agency takes up to 500 reserva-

tions daily, with 100 to 200 of them auto rentals. "A reservation should take 12 seconds on the computer, and [instead] it takes a half-hour. I can't say it's devastating, but it backs up your workload and you're giving less service to your

When outages occur, it is difficult for users to know where to point the finger, a problem that was magnified last week as travel agencies logged calls to dispersed help desks.

The travel reservation system is highly interlinked. For example, Wizcom Inter-national Ltd., the Garden City, N.Y.-based reservation system provider for Avis, also serves 19 other rental-car businesses and So hotels, including Holiday Inn and Radisson. And it links travel agents to the FacySahre reservation network.

OLIDATED SYSTEMS Today, about 90% of all travel agencies use one of two computerized reservation systems: EasySabre from Sabre Group Holdings, Inc. in Fort Worth, Texas, and Apollo from Galileo International in sont, Ill. Those mainframe-based systems are tied to smaller systems, including Wizcom's

Mike Estill, technology committee head at the American Society of Travel Agents in Washington, said the Sabre system wasn't designed to work with oth-

er proprietary reservation systems The issue isn't the stability of the individual reservation systems but the increasing connections among systems. "It's a whole mess out there," said Robert Langsfeld, a travel consultant in Incline Village, Nev. The more interfaces you have, the more Band-Aids you need, and the more problems

you have." EXPECT DELAYS

Problems are inevitable as more tour op erators, car companies, cruise lines and airlines move to merge customer reservations and connect to other systems. Es-

The Wizcom system's u-hour out

began at 5 a.m. EST Tuesday. The outage was caused by an apparent software glitch coupled with an overload of network traffic, a company spokesman said. "It was a major bassle," said a travel agent at San Francisco-based American

tion numbers all day." director of information technology at Chervenak, Keane and Co., a New York

Express Co. "We couldn't get confirma "It really is a big problem to have that kind of downtime," said Geoff Griswold,

based hotel data systems consu To make matters worse, the backup system for many companies is the far machine or the telephone, he said Bill Ferguson, a Wizcom spokesm

said the company is upgrading its server capacity and implementing a warning system for systems managers. An Avis spokruman said the company was working closely with Wizcom on the



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ts powerful search angine less users find, understand and take advertage of information counts wherever they make reade historighters use the

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NAGEMENT



Sybase suite to speed data warehouse building

Wasserson

SYRASE, INC. IS BUNDLING all the tools needed to build a data warehouse in one neat nackage That's good news for corporations that

are on the werge of creating a data watefor the many companies that have already done so

The Warehouse Studio bundle is ex pected to slash development costs and time because users won't have to integrate tools from different vendors The product was announced two weeks ago at the International Sybase User Group conference here The Emeryville, Calif-based vendor said Warehouse Studio is due out by year's

The suite includes a database management system and software tools for warehouse design, metadata management and warehouse administration There is a central repository of meta-

data - detailed descriptions of the data - to maintain consistency and data Memphis-based Federal Express is

beta-testing the suite to build data marts for the package delivery company's electronic commerce and logistics divi-

The data marts will be tied to one data repository to eliminate the problem of disparate data marts collecting different information. And the suite will let analysts gather information from a single

The new data marts will replace a hodgepodge of IBM DB2, Sybase, Oracle and Informix

databases at the are spending a lot of time going to multiple sources and manipulating data to get an-

swers to questions for Imanagers)," said Tim Regan, manager of advanced infor-Repair: The dat motion develop mart nivas him "a ment at FedEx "We don't see what they go

package that all works - and if not Sybase takes through to get those answers pulling their hair out, making phone calls and combing different databases

and the mainframes," he said. "I have a small staff and a large mandate and a lot at stake with this program With the Sybase data mart, "I don't have to go find all the tools and pieces and hope they work together. From a business perspective, it gives me a package that all works - and if not, Sybase

takes responsibility to make sure it does," he said But Sybase may have some trouble finding customers for the new product. Many companies have spent the past few years digging up those tools themselves and building data warehouses on their

"The data warehouse boat seems to have already sailed," said Terence Light, manager of systems development at United Grain Growers Ltd. in Winnipeg, Manitoba, "A data warehouse bundle is not something we are interested in. We built our own warehouse a few years

Mike Gilpin, an analyst at Giga Information Group in Cambridge, Mass., said the tool set still could be useful to companies that have a data warehouse but want to quickly build some specialized data marts, too. II





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Echoes of history in Microsoft case

By Patrick Thibodesis

they a socressive would probably sympathize with Bill

Like Microsoft Corp., Rockefeller's Standard Oil Co. con trolled about 90% of the market in the early 1900s. And, like Microsoft, Rockefeller faced a hostile U.S. government concerned about his firm's rapidly growing market dominance.



Rockefeller sold fossil fuels Gates sells software. But both men confronted the same issue: the Sherman Act, the U.S. envernment's antitrust law passed

"Software is becoming the basis of the new economy, but surely that was also true of petroleum in 1011," the year Standard Oil was broken up, said William Connanor, a forme chief economist at the U.S. Fed

eral Trade Commission. The U.S. Department of lus-TIME LINE-

against Microsoft will likely con tent that the company has used

its market power to override the checks and balances of freemarket competition. Microsoft, Standard Oil and similar companies "achieved their dominant positions he be-

ing efficient, by being aggres sively competitive, by innovating, by reducing prices," said Dominick T. Armentano, an adjunct scholar at the Catn Institute a liberturian think tank in Washington. That's the only way to explain (its) market

But that doesn't mean the government should leave those companies alone, Comanor ar gued. Microsoft "seized the opportunity — and more power to them - but does that mean that therefore the economy should accept their dominance forever and forever, despite the possible cost to society?

In its Microsoft challenge, the Justice Department is alleging in part, that the company is using its monopoly in operating systems to gain control of an other market World Wide Web But Microsoft's decision to

give its browsers away for free is "not a novel practice, either," said lames Brock, a professor of economics at Miami University in Oxford, Ohio. For example in the 1900s, the American To baccn Co. save away tobacco to

crush competition. The courts broke up Ameri-

can Tobacco in 1911 - but corporate breakups are few. Instead, most solutions seek some kind of change by the offending But the rapid pace of technol-

ony also means the legal process must move more quick ly if it is to truly serve the interests of those it means to moter1

Marc Schildkraut led the FTC's antitrust investgation in the early 1990s into Microsoff's practice of having PC makers may for the MS-DOS operating system on every computer it sold, regardless of whether it was in stalled. The FTC could not serve on an action and turned the can over to the lustice De partment, which got Microsoft to sign a

consent decree ending the practice The investigation be gan in 1000 and was concluded in 1994. But at was too late to be of any help to DR-DOS. rival operating system owned by Novell. Inc. Microsoft had already

built its market share. More over, the growing use of Win dows made it even more difficult for aval operating systems to establish a foothold "I don't think (the govern ment'sl antitrust (division) can

just give up because it's a fastmoving industry. It's got to try to do what it can to make our that people are not preventing other people from entering," said Schildkraut, who is now an antitrust attorney at Howevy & Simoo in Washington. The government's antitrust

battles must also deal with mar-

ket fromes. Since the 1084 AT&T Corp. breakup, the seven Baby Bells have been reconsolidating If SBC Communications, Inc.'s merger with Ameritech Corp. goes through, there will be just four Bells left.

That hasn't discouraged one antitrust attorney who was at the furtice Department when the AT&T case was under way

in the early 1980s.

nt, but the oil industry emerned stre "On balance, the (AT&T

breakupl remedy worked by and large," said Tyler Baker, now an attorney at Carrington, Coleman, Sioman & Blumenthal LLP in Dallas. "The notion that we're back where we started is fundamentally wrong. . . There hom been fundamental con changes [here] that have unleashed a lot of competitive

The AT&T breakup is credited with cutting long-distance phone rates and allowing local rate competiton, although local competition remains small April 1995: DOJ sues to block

the Intuit deal. Microsoft cancel

the purchase a month later

June 1995: DOJ investig

Microsoft's plans to bundle The

Microsoft Network with Wir

dows 95

The effectiveness of antitrust remedies may be debated, but in two brior major antitrust cases, the results were clear, according to Comanor and F. M. Scherer, a fellow former FTC chief economist, in a 1995 pa per in The International Jou of the Economics of Business

The case against Standard Oil as well as a similar one against U.S. Steel had radically different outcomes, both for the companies and their

> The government won the Standard Oil case and broke the company into more than to successor companies, but it lost its U.S. Steel battle in

It was the "losers" in the big breakup antitrust cases that flourished, and the "winners* that foundered, Comanor said.

The successor com pames of Standard Oil and American Tobacco dominated world markets, Comanor said. But U.S. Steel went into long decline

According to David R. Hen-derson, a fellow at the conservative Hoover Institution at Stanford University, in the decade Rockefeller assembled his trust. Standard Oil's output expanded considerably and prices fell about 60%. Today, Microsoft's aggressive tactics have caused prices to drop for everything rom operating systems to word processors to databases

Gates, like Rockefeller, is be ing "punished" for his success. Henderson said. - Senior writer Stewart Deck

contributed to this story.

ing it awar

for free in a

challenge to

Netscape tions Corp.'s competing Navigo tor browser

August 1996; Netscape accus-

es Microsoft of predatory practices to push Internet Explorer 4.0. The Justice Department begens investigation a month late

aber 1995: Microsoft re-

June 1990: The Federal Trade Commission (FTC) investigates possible collusion between Microsoft and IBM in the software

complaints that Microsoft's operating system division gives insider information to its applications division

February, July 1993: FTC deadlocks twice on the 1991 plaints and decides to close

August/September 1993: Justice Department and European Community (EC) antitrust inves tigators begin independen crosoft forces unfair license March 1991: FTC investigates agreements on PC makers

> July 1994: Microsoft signi consent decree with the DOJ and EC, agreeing to stop charg ing OEMs a blanket rough on all PCs sold even if the machines aren't bundled with Windows. Microsoft also agrees not to force Windows licensees

to license other products October 1994: Microsoft an-

ounces intent to buy intuit. Inc. Three U.S. senators ask for a Justice Department investiga-

ludge Stunley orkin rejects the July 1984 **OEM** licensing



August 1995: A federal appeals court reinstates the July 1994 OEM licensing agreement; leases Internet Explorer 2.0 for Customer Relationship Management

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Sprint teams with IBM for move to frame relay

> Tricky' migration can result in significant savings

By Matt Hambler

SPRINT CORP. HAS allied with IBM to belp users make the tricky move from (SNA) networks to Sprint's frame-relay It is the latest example of a telecommunications megatrend. In an effort to

carriers are adding a variety of managed services to their network services As part of the alliance, IBM - which originated the SNA standard for main frame communications - will provide network grar and consulting advice so the magration to frame relay will go legacy Systems Network Architecture provide users with one-stop shopping.

more smoothly. Analysts said such a conversion is technically tricky, but it can result in a 20% to 40% data communi-

cations cost savings The good news here is that Sprint is saying to customers, 'Applications including arcane stuff like SNA aren't our forte, so we'll bring in the experts -IBM — to move your applications across our frame service," said analyst Johna Till Johnson at Meta Group, Inc. in Stamford, Conn.

Johnson also said there is going to be a "huge trend" among the carners to package services from third-party vendors with their own networks, "Carriers have gone from being the ware you send stuff over to wider service providers," she

A 1 FG 110

"In the future, it will make a difference for a company to get many different services from one vendor," said Jack Reed, a network manager at Grumman Systems Support Corp. in Longmont, Colo. "And I think the early players will have the advantage because of the relation-

shins with customers they set un." Reed said he doesn't have SNA appli cations in his shop to worry about, but he added that last fall he saw bow Sprint edged out WorldCom, Inc. in Jackson, Miss., for a contract to convert analog voice services to digital in his office.

ALL ABOUT SNA

ents such as Adv

Reed favored WorldCom, but upper management wanted to work with Sprint because of a long-standing relationship with Sprint as the primary long-distance vendor for Grumman at many sites around the country

WHAT REALLY MATTERS "It doesn't really matter if price is some

what better," Reed said. "What matters is if carriers can provide all these services and have a relationship with the cus-

Analysts predicted that other major carriers, such as AT&T Corp. and MCI Communications Corp., will announce partnerships with software and hardware vendors to leverage their networks.

The Sprint-IBM alliance announced two weeks ago isn't exclusive, so IBN could work with other carriers on migrating SNA traffic to their frame-relay

But analyst Paul Wickre at Frame Relay Systems and Technology, Inc. in Washington said the Sprint-IBM deal will give Kansas City, Mo.-based Sprint a head start on reducine AT&T's domi nance in the dedicated private-line market O

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Iava

DEFINITION: Java is an object-oriented programming language created by Sun Microsystems, Inc. in Mountain View, Calif. It can allow applications to run on any device or computer regardless of the operating system. Java was originally called Oak and was meant to be a programming language for set-top boxes and handheld devices.

Java benefits abound, but skeptics doubt cross-platform guarantee

By Carol Slive

tava's raomise of being able to "write once, run anywhere" is a big lure for corporate developers who need to write Web-enabled applications or tie together existing legacy sys-

But skeptics question Java's cross-platform guarantee. Microsoft Corp., for in-

stance, claims that "write once, run anywhere" is a myth that isn't easily achieved in the real world. The com pany says programmers instead should use tools that are meant to take advanbase of the specific features and services of the underlying operating system. Even if tava doesn't work as well as advertised, it's better than any other option out there," says Michael Barnes, an analyst at Hurwitz Group, Inc. in Framingham, Mass, "it's not seamless, but it's far less painful than porting any

other language lava's other downsides in clude inconsistent levels of support and slow performance in World Wide Web browsers. But depending on the application, Java could

prove less bothersome than alternatives such as scripting languages. You start off thinking script is easy since you can read it and it's relatively easy to interpret," says Tim Sloane, an

analyst at Boston-based Abendeen Group, Inc. "The problem is, things start to get big very easily. Java brings an object-oriented development envi-

ronment that makes it easier to maintain. The fact that it's portable is icing on the cake

Most of the attention given to Java has been on the client side. But analysts say attention is shifting to the server as tools improve and standards crystallize The move makes sense. Most users have Windows on their clients, so run ning cross-platform applications isn't a

big issue. But on the back end, developers need to tie together applications and integrate data across mainframes and Unix and Windows NT boxes For Windows on and Macintosh pro gramming on the client, or Windows NT and Unix on the server, Java pro-

tire application.

vides a better shot at reaching all users without the bassle of rewriting an en-

Further, because the language is object nents, which is another time-saver. O QUICK for Java research, books, STUDY world articles, go to

"Just the promise of the ability to

match platforms own if it requires

some level of porting, is powerful," says

Mark Huey, a senior research analyst at

That isn't the only benefit, Many de-

velopers can write applications faster with Java than with other languages

such as C++. And because lave is easier

to use than C++ it reduces mistakes.

Meta Group, Inc. in Stamford, Conn.

ROBERT FORBES

USERS TELL THEIR JAVA TALES

Technology manager First Tennessee Bank

Java use: For online banking ag cation that lets customers check their account information, pay their bills, transfer balances and seek

Pres: it can create an application that has an application look-and feel, rather than the look and feel of a static Web page, Forbes says. And you don't have to deal with the constraints of Hypertext Markup Lanquage or scripting languages. "In a scripting situation, as my num of customers scale up, I have to have a faster and faster box. So Issues of scalability and manageability come up," he says.

Cons: There are bands ments for end users because Jave needs to be downloaded every time a user accesses the online bar application. As a result, thera is a performanca penalty, Forbes ob-

JEFFRY BORROR

Director of Information Daiwa Securities America

> Java use: For writing trading ems that omers can access via the met, that New York

ased amplo ees can acces via an intranet and that Tokyo yees can access via an

Pros: Java is pietform-independent, portable and scalable. It's easier to write and maintain than C++.

There's also a growing collection of reusable third-party code in the form of JavaBeans, such as the pr built blocks of code used for screen

Cons: There are adequate dev tools available for Java, but oth ages still have more. Perfo mance on the server side is too slow for real-time processing or large transaction systems - even I it gets five to 10 times faster by the end of the year as expected. There's also the threat that Microsoft will hilack the standard. So full co ment to Java is a little premature.

JOHN MELKA ior systems en NationsBanc Services, Inc.

Borror says.

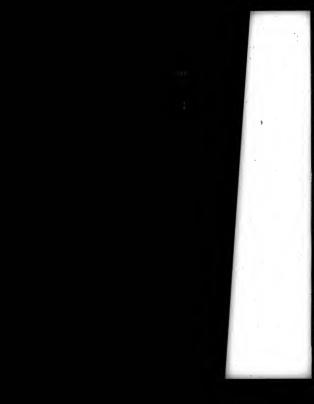
Java use: For financial decision port software to help internal oyees do their jobs efficcio and for financial extranet applications that corporate customers can Pres: Java is platform-ind and it's simpler to use than C++ because of the way the language is structured, Melka says. And in Ja the application interfaces are the same for each platform. "It's learn once [and] use on multiple plat

forms rathe than learn nace for each

> Cons: Java is still young, so it's hard to find

a lot of peop who understand it. "Java program rs are at a real pres you need to staff a project, that's

an important problem for you," Melka says, Java Development Kity are still in flux, and browsers are too tightly coupled with Java virtua nes, which interpret the cod "The Java virtual machine shou plug in to the browser so as we go to the next version of the Java virtual machine, we can plug it in and not have to wait for a vendor to implement It." Melka says.



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today is online privacy. Somehow, some way, we want to slip invisibly through the most public of all networks, dodging the direct marketers and preserving the illusion that we can control all pertinent information about ourselves. One widely quoted survey of 10,000 Web users ains that privacy concerns now overshadow o ship as the "No. 1 most important issue" on the



1 most important issues" have we already seen rise and full on the 'net? Every thing from government sership and pome sites to junk E-mail and online stalking has had its requi-

site 15 minutes of cyberfame. And now those deep thinkers in Congress are sorting through up to 90 difrent privacy bills, a political spitting contest that honefully will choke on its own salva.

in the meantime, it's clear what Web-based busies should do to keep the customers coming and the feds at boy. As our story fast week pointed out ["Web sites rush to self-regulate," CW, May 11], many online merchants are already scrambling to publish their own "privacy policies," which inform and reasture customers about how the information about them is handled.

There also are numerous products surfacing to southe the savagely private surfer. The World Wide Web Consortium, for example, is developing technology that will let consumers set Web privacy preferences in their browsers.

Smart companies don't do stupid things such as invading the privacy of customers. At least, not if they want to fast beyond 15 minutes of fame.





we are brought in by executive

management that at least two

other companies are going to be

handled by a project manager for

comparison purposes. These are not "guernilla tactics" or "leaping

over IS" if sales-

people require ac-

cess to various lev-

els of the organiza-

Sales executives

Rill Ricrhouse

Some buying decisions need input from outside IS

THIS LETTER IS IN response to your cover story on "Backdoor sales: Vendors target non-IS exect to close the deal" ICW. March 161. My organization sells SAP's R/3 products in the Southeast. The majority of technology decitoday such as

choosing an E-mail backup strainers or network architecture, should be made within the IT department and under direchave a goal of providing a greater return on investment than our competitors so we can earn their

tion of the CIO. When the decision is for an enterprisewide system that will affect operations at all plants it seems only logical for the CEO, CFO and other senior executives to be significantly involved in this business decision.

Sigmo Alpharetta, Ca. bierhouer@ael.com Government made a positive difference in suing IBM

> Harvey R. Tuci Dayton, Ohio

AVE MOSCHELLA'S April 27 col will most likely benefit this coun

and Big Tobacco," CW] was a great -By 1969, IBM had won the computer race of that time from bigger adversaries, such as GE and

RCA. As a now-retired IBM engi neer. I would be richer from my stock if the federal government had not rued IBM. But the U.S. would not be as well off. The Japanese might be dominant in PCs and software be-

cause IBM had to separately price --Because of the threat from the antitrust judge. IBM gave Intel and Microsoft an opportunity without patenting the PC design and without insisting on owning a ing system.

piece of each of those companies. Similar antitrust action against the 1990s winner, namely Microsoft.

Just say no to warranty info As salespeople, we know when

AGREE WITH Dan Gillmor's col-Computerworld ["Violating privacy is bad business and especially object to companies that gather information under false pretenses

When faced with a warranty registration that asks for such unnecessary information as my income and occupation (or education, etc.). I provide only the information that I think is needed,

usually name and address. I've seen a disturbing trend recently, though, in software products that use online registration. They designate unnecessary fields as mandatory and refuse to complete the registration until you fill

Usually I comply, but sometimes this causes annoying nagging. If the product is free, then I accept that they've got to make money somehow. If I've purchased the product, I feel, as Gillmor does, that the purchase itself activates the warranty. Registration should be limited to only necessary information.

Calvin Crumrine Personalized Computer Solutions Juncou, Alaska

ments from its read Letters shouldn't exceed 200 words and should be addressed to Maryfran Johns Executive Editor, Computer-world, PO Box 9171, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax nur ber: (soli) 875-Eest; internet ters@cw.com. Please in clude an address and phone

Days Mosconstant April 27 or and the industry

ketuck@worldnet.att.net Best not get out in front

IOM THE looks of things, prople may start firing employees who are betting on Microsoft soft ware that isn't currently on store shelves. IS personnel should know by now not to bet on Microsoft re-

leasing a product on time. I feel sorry for those who are first in line to purchase Windows 98, Win NT 5.0 or Hydra. After all, look how lone Win or took to become a relatively stable operat-

> Ricky Hard percenting of teaching not

Hard data (at last) on year 2000 costs

Paul A. Strassmann

ntil now, all year 2000 estimates came from conjecture, opinion polls, guesswork and questionable extrapolations by often selfanointed experts

We have, for the first time, information about year 2000 costs and progress from an authoritative source: first-quar ter 1998 reports filed by U.S. corporations listed with the Securities and Exchange Commission (SEC). The information was compiled by Triaxsys Re-

form to regulations issued last year. The data has greater credibility than anything published so far because it is likely to be used in any bigation against cor-

To understand what this wealth of year 2000 information means, relate it to the characteristics of corporations that file reports with the SEC. The total revenue

of the 4.260 listed firms that must renort is about \$6.6 trillion. For the first quarter of 1998 (covering financial data through 1997), the SEC identifies only

U.S. organizations' SEC fillings lead to a surprising conclusion.

85 major companies with year 2000 adgets greater than \$10 million. That includes the nation's largest

Although the number of firms with reported year 2000 budgets is ery small, together they account for 19% of all corporate revenue and 24% of all corporate profits. Clearly, the firms that are ready to talk about their year 2000 progress are the premier U.S. or-

contrations. Those organizations plan to end a total of \$9.4 billion to fix their date-change problems. Because they rep resent a mix of industries. I was able to come up with a cost estimate for the entire U.S. corporate population on the basis of revenue. Such an estimate sucgests that the total budget for fixing any year 2000 headaches for corporate America is only about \$40 billion - a number much smaller than any proc-

nostications so far. by a wide margin! Now comes the interesting part Although the 85 big companies plan to spend a total of \$9.4 billion. ther've spent only 20% of that amount to date, which suggests that corporate America is ready to not only about \$16 billion for fixing the year 2000 situation in the time that sains. Can that be accomplished?

I have data for IT budgets for 20 of the firms that reported their year 2000 budgets to the SEC. With high reliability I can now predict the expected year 2000 spending if a firm follows known patterns. That analysis suggests that in the time remaining, year 2000 spending will siebon off only 8.1% of annual IT

budgets. That calls for a material shift in the budgets toward software services, but

is oute manageable despite mount and evouse that failure is imminent because the job can't be completed. In fact, if this money is used prudently to correct the inherent flimsiness of the existing soft ware, it may be a good investment

Before we dismiss all the alarmists of the coming doors, note that I don't think we should depend entirely on the data that has been filed with the SEC. The shattering revelation in the reported details is that only four firms so fa claim they've progressed with complete ems testing

Until test results are independently validated and verified, we can't place much credence on easy prospects of fixme the war 2000 diseas

The old advice "Trust, but verify," is more applicable to software than to any

My advice is to proceed immediately with testing a representative sample of critical systems. The experiences gained from such a pilot would confirm whether the estimates filed with the SEC are fiction or reality. D

Strassmann is chairman and CEO of Softwere Testing Assurance Corp. His Internet address in cools stacore.com

When employees launch their own Web sites Michael Schrage

iant Financial Services Firm (GFSF) encounters a digital dilemma: Some of its best brokers have posted their own Web sites to alert, advise, attract and support clients.

That mushrooming of internetworked management media rivals GFSF's own branded site. What to do? Kill them all! Citing legal uncertainties and Securities and Exchange Commission compliance concerns, GFSF outlaws unauthorized sites and orders them ex-

Unenlightened digital despotism? Or a very smart move for both branding and regulatory reasons? We'll see soon enough. But the Web as a medium to disintermediate the enterprise has rapid ly become one of the most provocative management challenges around for organizations that purportedly care about their customers

The typical top management concern, of course, has been figuring out how best to block unauthorized intranet access. Yawn. Round up the usual suspects: firewalls, passwords, encryption, and so on. In peactice, the more serie issue may well be the rise of extracurricular pages and sites that spring up unbidden - but for dam good reasons to serve key customers or suppliers A few years ago, I was writing about unauthorized intranets helping divisiand departments run themselves. Todas.

it's clear that the challenge of unauthoized extranets will matter far, far more Extranets represent the most serious business threat to clean, manageable distinctions between internal and external.

Them and Us. In truth, the real importance of firewalls may be to keep entrepreneurial employees in rather than to keep maleyolent intruders out. What happens when purchasing

agents post special advisories for their most favored suppliers? Or when a derivatives design shop at a major investment bank decides to set up a special simulations extranet for its best insti al clients? Or when a top salesnan creates a site that lets customers

ticipate in a special Web auction for a backlogged product? Who in the organi zation tracks that? Who's responsible Legal? IS? Are employees expected to rat on colleggues who are using extranets to

extend their market reach? You could comfortably make a case that an organization might want to encourse that sort of initiative. Of course there's a very thin line between dy namism and chaos. After all, economis Joseph Schumpeter did describe entre

neurable as "creative destruction." There should be little doubt that if say, the top 50 or 60 salespeople at IBM or Morgan Stanley or Xeron each had their own unique

site - distinct from but complementary to their employer's corporate site - that would unsubtly shift the balance of power



Should you block unauthorized sites or embrace them?

it really be in an organization's best in terest to force everyone to manage their key customer/dient/supplier relation ships through the official Web site (how ever that evolvest? That's a tough case to

As the true tale of GFSF affirms, those business concerns exist in the here and now. I wager that Jack Welch and his lieutenants haven't a clue how many extranets are being used to manage cus tomer relationships at GE. How about GM? Microsoft? Oracle?

In the same way that power users of Lotus 1-2-1 and Excel spreadsheets accu ulated organizational power from their fluency in financial modeling, it's in evitable that entrepreneurial extranets will confer advantages to those who want to create proprietary relationships with external con-

In other words, the real business competition the Web can create will come from within. That's going to make Fortune 1,000 Web b management a lot of fun to watch. C

Schruge is a research associate at the MIT Media Lab and author of No More Teams! His Internet address in



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Youth movement: A new generation of CIOs Allan E. Alter

et ready. There's a CIO youth movement heading your way. Randy Mott. 41. at Wal-Mart, Dawn Lepore. 43. at Charles Schwab, and Charles Baumann, 37. at Cigna Integrated Care are the vanguard of an inevitable wave of babv-faced chief in-

formation officers.

"We are losing the older guys. They're being put out to pasture, parachisted out, moved asode, returned arafter," says Marik Polansky, managing director at search firm Korn/Ferry International's New York office.

I suspect the year acoo preblem to partly to blame. Older CIOs will be leaving in droves. Many will retire to evade millennial finger pounting and lawnuts. Others

will be forced out when CEOs discover their systems aren't ready. Who will take their place? Not the other old armers at the company: they'll be tained by the same mess. But even without the year 2000 problem, we'd be due for a generational humover. When CEOs look ahead to the Organizations seek out

organizations seek out the stars of the Internet and client/server era.

and century, they see a very different IT future. They won't look to veterans who were weaned on mannframes and minicomputers. CEOs will want the stars of the Internet and client/server.

generation.

The good news is that many of the young generation are ready They aren't smart-alecky cyberbrats; they have real

leadership expenence. "There's more opportunity for young people to get expenence naturalg big projects, thanks to the growth in IT spending and use of technology," way Checago-based executive recruiter. Alvan Borenstine. Those young leaders have shown they can build strategic systems, think like businesspeople and work with line managers.

PLENTY OF ROOM

But even CEOs who aren't looking to the new generation to lead 15 may have to hate them. There are probably more CIO openings now than ever before One reason: More companies have CIOs. Smaller firms are

creating CiO-type positions because they need a businessminded leader who can put technology to strategic use. Five years ago. Saon million to Syoo million companies were brings their first real CiOs, now the threshold has dropped to Sioo million to Saoo million, according to William A. Grady, derector at Romac Executive Solutions in

million, according to William A. Grady, director at Romac Executive Solutions in Boston. Older 15 executives at large companies don't want those jobs: the pond is smaller, and the pay is lower That means opportunity for young CIO wantsa-los Another reason: CIOs are leaving their old jobs to take higher paying new ones to said the said the leaving new policy and the said the did the control of executives are taking advantage of the economy and finding new jobs. Executive job searches climbed more than 50% last year, according to one headhunter association

Because CIO salaries are increasing – by 34% between 1933 and 1937, according to Computement's latest salary survey — CIOs have every reason to follow the crowd. No wender fellow columnss Paul A. Strassmann found that the CIO turnover rate jumped from 24% to 40% between 1935 and 1937. What does it all mean? More CIOs What does it all mean? More CIOs

with Internet know-how, an innovative cyberbusiness mentality and a knack for turning hot new technologies into moneymakers. IT leaders more in tune with the GenX workforc. And a final break from the culture of the mainframe past.

It all adds up: More CIO openings.

If all adds up: More CIO openings, plus growth in IT use, plus changing needs equals demographic shift. Smells like a youth movement to me. D

Alter is Computerworld's department editor, Managing, Hts Internet address is allan alteriticacom

How to reasonably rein in Microsoft

ometimes the worst things in life happen after you get what you think you want. We all now know that the Justice Department will at least try to limit Microsoft's power.

It appears that the company is willing to compromise on just about anything encept its ability to integrate or bundle-new features with its operating systems. I couldn't agree more. Microsoft should be allowed to put any feature it wants into the operating system, and certainly that includes Internet Englorer. No government will ever succeed in trying to decide what software abould or shouldn't be uncertained. That is entirely shouldn't be integrated. That is entirely the contraction of the contraction

Microsoft stall.

However, once Microsoft decides what services it believes are part of the operating system, authorate oversight because yield much more feasible — and potentially much more feetable. — and potentially much more feetable — and potentially much more feetable — and potentially much more feetable — and potentially that Assistant America General look klein and company press for the faither is designed by Microsoft as part of one guarant by Microsoft as part of one company's operating systems, it can be enhanced only when the operating.

tem is enhanced — not according to the company's own schedule.

For example, no one should object if

Windows 9d is shaped with Iterated Signature of the Signa

and eventually. Windows 95.

If that principle were applied, Microsoft's behavior would change dramatically. Rather than label every valuable new feature as part of the operating system, the company would position most new applications as distinct rounducts to be marketed. sold and distributed separately. Hardware vendors still could install those products as part of the purchase process, but such installations would have to be ordered by the customer — like any other hardware or software option

SOAL ACHIEVED

The net effect would be to reverse the current dynamic that gives Microsoft incentive to wook loward an ever-moreencompassing operating system. The company still would seek to improve operating system performance and reliablity but would make most additional features and services

separate products. That would create a more level playing field. Of course, that

isn't what Microsoft has minud. It continues to make the

The company itself has given the Justice Department an opening.

totally unconvincing case that although Internet Explorer was integral to Windows 95, it needed so go through three major upgrades before emerging once again as integral to Windows 98 it makes that claim even though each new release was marked and distributed enited on the second of the second of the release was marked and distributed enities was marked and distributed enterly as a separate product, not an operating system upgrade.

Should the Justice Department choose to do so, it will be relatively easy to prove that Microsoft has engaged in predatory and anticompetitive business practices. The more difficult challenge is to figure out what to do about it. To avoid doing more harm than good, any would be overseers must find a samele set

supportive process for assuring a supportive process for assuring a more competitive software industry. Strangely, Microsoft itself has goten the Justice Department the opening it needs. Klein should simply say. "Yes, you can bundle anything you want, but being part of the operating system means being part of the operating system means being part of the operating system."

Moschella is an author, independent consultant and weekly columnist for Computerworld. His Internet address is droschella@earthünk.net.

Corporate Strategies

Briefs Logging vendor cuts production time

 Resource planning, design systems will ease multisite development, manufacturing

By Thomas Hoffman

FIRST IT WAS the spotted owl that stunted the lumber industry. Then came the Asian currency crisis, which put the brakes on housing starts in Japan and Korea six

months ag In the highly cyclical logging industry almost anything can cause a change in the business outlook, said Paul C. Latta, an analyst at Ragen MacKenzie, Inc., a Seattle

And any change in the lumber industry as a challenge to companies such as Timberjack, a Helsinks, Finland-based manufacturer of equipment used to cut down trees and haul them away.

In a bid to stay fast on its feet. Timberiack

is standardizing its European and North American sites on one design system and investing in an enterprise resource planning (ERP) system designed to let cus tomers such as Tacoma, Wash-based Wey erhauser Co. and Georgia-Pacific Corp. in



ser to check on the status of loggi omers such as Weverh ment they have ordered end request changes

Timberjack's products are custom designed and built as they are ordered, said Kuldeep Chandra, director of logistics at

Timberiack's Woodstock, Ontano, plan Customers such as Weverhauser "want easy interfaces to belp them determine the status of their orders and when they can ERP trell, page 35

Ignoring development quidelines raises costs

By Julia King

IT capus at virtually every major company have formal guidelines for developing soft ware - usually in a fat binder on the bottom shelf of a remote cubicle. Sticking to those guide lines, which can

deliver higher-quality be difficult And failure to do so results in

much higher development and maintenance costs. Regularly inspecting application desire and actual code for example, can reduce software defects by 50%, according to Software Productivity Research. Inc. (SPR), an information tech-

nolegy metrics consultancy in But getting developers to follow stro-by-stro instructions. such as regular reviews and meetings with users, is about as

easy as collaring a cat. "A large number of them view process as the extraneous activities that have to go on to get to the cool part of writing Java or C++," said Roger Press man, a software en

gineering consultant in Orange, Cont But the problem is that without a process, you get screwed up just writing code So how do you get developers

to stick to the plan Have them help write it. That's the idea behind Deborah Lokken Berg's "Big Book of Best Practices," a set of guidement at \$22 billion Fortis P

nancial Group in Woodbury

Everest tests technology

By Rebecça Sykes ARMED WITH SOUSPMENT SOC cally designed by the Media Lab at MIT in Cambridge,

Mass., a U.S. expedition is on its way up Mount Everest this month, seeking data about Ever est's climate and geology. But the effort to outfit the climber mental. That's because the cli also shows the critical impormate - where temperatures or from subgero to uncomfortably tance of tailoring technology to

emedition have had to wrestly with the design and operation of the climbers' computer equipment, tackling issues from power conservation to real-time monitoring of remote systems. Technology bound for the aq.038-ft-high Everest can't be complex to operate or tempera

hot and the oxygen level is only

Burlington, Mass.

Timberiack is expecting an 18-month payback on the \$2.5 million ERP system, which includes hardware software and implementation costs



wanted to install a full-blown

an 18-year-old materials man

agement system from Hewlett

Packard Co. But the system

didn't allow design engineers in

Europe and North America to

electronically, said Phil Doble.

manager of information eve

Because Timberjack was also

using separate computer-aided

design (CAD) systems in differ

ent locations, it often took 18

single machine, Doble said.

Smith do their jobs better

The most significant change

(with the new system) is that we

should be able to do away with

the inefficiency of having to en-

ter data more than once" from

multiple geographic locations

said Smith, a systems integra-

tion and inventory control man

ager at Timberlack in Wood

terms on Winnelstock

nicate with one another

Manufacturer cuts FRP trail

expect to have them delivered," beriack because the co

Chandra said. Chandra said Timbersack ERP system to support the April plans to phase in customer inlaunch of a new manufacturing terfaces - such as dial-up consite in Birmingham, Ala., bu nections to the ERP system so customers can check on order status - after the company finishes rolling out the system

next year. Timberjack expects ao 18month parback on the \$2.5 mil bon system. Chandra said The need to connect with customers "is the underlying driver behind supply-chain automation," said Dennis Byron. an analyst at International Data Corp., a market research firm in

Framingham, Mass. Timberjack, a unit of \$2.1 bil lion Helsinko-based Rauma Ov. started installing an ERP system from Tucson, Ariz-based Industrial and Financial Systems. Inc. last November

DIFFERENCES The system, called IFS Apolications 'of, is unlike most other ERP systems in that its order-entry, manufacturing and other software modules can be

installed independently Most ERP systems, such as SAP America, Inc.'s R/s software suite work only after customers synchronize purchasing, distribution and software

The modular approach Tim-berjack is taking allows companies to add components when they want to, not when the software requires them. That was important for Tim-

> Timberiack's new alobal ERP system should slash the time it

stock C

takes to design forestry machines from 18 months to six

Ignoring guidelines can raise costs

CONTINUED FROM PAGE 37

"If people are part of developing the process, they're more likely to follow it," said Berg vice president of project man-So each time a project team

comes up with a proven techname for collecting require ments from users or developing workflow plans, they are invited to add it to the process. That process is based on Anderses Consulting's Method One devel opment plan

FLEXIBILITY Berg's guidelines include for

mal principles for organizing not at its sites in Woodstock project teams; plans for design Finland and Sweden It will ing testing and reviewing code move those offices to the sysand methods for tracking prob-Timberjack had been using

But none of these is set is stone because Berg said things should remain flexible.

The goal of process is not to create hinders but to deliver projects or software," she said. You can't take it as gospel." the prestigious Software Eng-That's why project teams are neering Institute in Pittsburgh.

encouraged to use the process more as a guideline for how to create testing procedures and

defining when and to whom a project will be handed of Technology managers at Northrop Grumman Corp. in Bethpage, N.Y., view ongoing

ocess education as the key to cutting software defects and costs. The aerospace contractor is training 600 internal IT staffers in rigorous peer review and other development procedures as the company drives to attain a Level Three status with

"As you get to Level Three there's more time that get spent on front-end reviews." said IT manager Ronald Ker tizak. "But by implementing those processes, you catch things early on in develop

And that can translate into huge software maintenance say ings later on

SPR has figured that compa mes save \$17 in maintenance costs for every \$1 invested up-front on requirements reviews, design and code inspec

tions and other development But there is still a major problem in that most develop ers aren't paid to stick to proce

dures, said an IT project manager at a large Midwestern retai *People are rewarded for set ting projects dooe, not follow

ing a process," he said. As a result, they get it done any way they can get it done fast.

Everest expedition tests technology "It's a really difficult problem

months for engineers in Europe one-third that at sea level and North America to design a stresses the gear and the peo ple. Media Lab scientists Timberjack expects to reduce designed special extreme clithat technology transfer time to mate weather sensors and vital lass those six mouths seen a tiens monitors so Yelintegrates IFS Applications with University's School of Medicin Pro/Engineer, a CAD system in New Haven, Conn., and from Waitham, Mass-based Boston's Museum of Science Parametric Technology Corp. can conduct their experiments this fall. That should help peo on Everest, whose summit litter ple such as Timberiack's Ken ally pokes into the set stream.

AT THE TOP

To monstor Everest's persious weather conditions, which have been only spottily recorded, re searchers want to install a sen sor at the exercist MIT erroles. sor Michael Hawley and his team created a probe designed to measure the bank climate

without succumbing to it "It turns out that no one has measured the wind speed at the summit," and only a few mea surements of barometric pres sure or temperature have been

taken. Hawley said Moreover, earlier me ments are atypical because climbers make a summit al tempt only on "good" days, he

But a bigger challenge was designing the body-sensor packs worn by the climbers.

to get bits associated with your person tied back into networks," men under the best circum stances, said Robert Poor, a Media Lab graduate student. "Log come a work's worth of data and beaming it wirelessly down the mountainside is a substantial challenge."

> without bulk was probably the biggest obstacle. The pack batteries had to be long-lasting without being too heavy or nu merous, Poor said The Media Lab solved the problem by creating batteries that sleep for five minutes and

awakeo every sixth minute to provide the power the sensors need to take readings and radio the data back to been camp. The result was a 2-pound rock that uses three commercially available qV lithium batteries Even at base camp, more than 10,000 feet below the

summit, the technology must be rugged. The computers that will process the data coming off the

mountain must be able to function in a tent at 17.500 feet higher, that is, than the Alps or the Rockies and a far cry f

Disk drives, for example needed special attention for the conditions at base came because they operate using a bubble of air, and air density changes depending on altitude No drive has been designed for use at 17,500 feet, said Ted

Selker, an IBM fellow at the Alamaden Research Center in San Jose, Calif. But he was able to make a 4-pound ThinkPad 560 notebook work at high albtude and low temperatures Tests show that its drives an pear to function as requested With the equipment ready to

go, the main task during the expedition is monitoring the sys tems. At the request of the Yale researchers, the Media Lab designed the systems so their sleen cycle can be overridden in the event of suspicious data The override feature also lets them immediately initiate a secand reading.

Solves serites for IDC Neuro Service in Boston.

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tage of those

ad detects errors. form independence Has the types of glitches

$\underline{\mathbf{Briefs}}$ Journal finds quality pays off

► Tons of content, special features auadruple audience in 16 months

By Sharon Machilis

AMID A FLOOD of free cor available on the Web. The Wisl Street Journal Interactive Edition has signed up 200,000 paying obers in less than 18 months and expects to move into the black next year.

"They are hugely successful. [The Journal] is the only kind of success story out there [in its markett," said Bill Bass, an analyst at Forrester Research, Inc. in Cambridge, Mass. "Dow Jones is going to be a big, big winner in the business information space."

More sites are now trying to move to the paid-subscription give the site's re

dows developers only.

(beta)

Pres: Takes advantage of COM objects, ActiveX con-trols in multithreaded ap-

ts and dynamic HTMI

tes coding statements

ges. Code editor com-



model, including Business West world, the webrine Slate

The Journal had some advanages as it moved to the World Wide Web. Its audience of serious investors was more willing than average consumers to pay \$49 per year for useful information (\$49 per year for print subscribers), and it already had a well-known brand name in the print world.

"It's a business nec Bass said. The journal's global daily print circulation stands at a million.

Executives working on the roject said there was still a lot to learn in moving from print to digital. There are higher espectations in what they'll pay for on the Web," said Tom Baker. business manager for the Inter-active Edition. "The depth of the Digital subscriptions, page 44

Java for Windows only

> Platform independence suffers with I++ Re Housed Millman I tested a beta of the J++ 6.0

elease scheduled to ship this MICROSOFT CORP. has resha summer. Despite running into some glitches that I expect with Visual J++ into a sensational de-velopment tool set, although its betas, such as out-of-sequence strongest features benefit Win messages during inst and sluggish speed, I believe this release will set a standard in ease of use, logical design PRODUCT REVIEW and productivity. It jumps ahead of competing Java devel ▶ Visual J++ 6.0 Corp. (formerly Borland Inter-

national, Inc.). Sun Microsystems, Inc. and Symantec Corp. Jee integrates and ships with Microsoff's Internet Explorer 4.01, and the setup program forces you to install Explores 4.0s before you can install J++. Apolets and dynamic Hypertext Markup Language (HTML) pages produced using J++ should run on any vendor's browser that complies with the

World Wide Web Consortium's new client-side dynamic HTML standards, according to Mi-The package's most exciting new feature for sinister to

By Carol Slipe

have let rank-and-file employ easily enter and update information for their human resources departments are catching on with managers, too Federal Express parent FDX Corp. in Memphis, for instance. wants to let its managers write employee performance ap

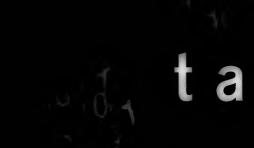
transfer them to its main database. But the managers can't key the pecessary information in to the character-based main-frame terminals that FedEx has been using since 1981 for so called self-service applications So FedEx turned to the Wor

place software suite from Seek er Software, Inc. in Oakla

World Wide Wait

Intranets help managers

automate paper shuffling



maintain (Explicit on)

m e

Works

digita

Intranets help automate

Calif Seeker's nuckage includes an anplication called Events@Work, released last week, which automates many routine manager transactions, including his

Switching to the user-friendly intranet software from the company's mainframe-based self-service applications is

like "the difference between the Owom

Mary and a rowboat," said Jim Candler,

vice president of personnel information

"With the new technology, [users]

systems at FedEx.

Bestol-Myers Squibb Co in New York, ing, compensation and employee leave which has \$3,600 employees worldwide. wanted to build some kind of workflow system and peeded to let managers know who each employee's supervisor is.

It built an application to run on the Seeker platform to do that

frames - all of which help the users

through the transaction they're havior

place additional applications that will let managers promote, transfer and allocate salary increases directly to employees instead of having to report those staff

changes to their human resources de-'Managers are not paid to ride herd on paperwork " Warner said. "They're

paid to coach and manage and deliver results CUSTOMIZED APPLICATION

Because the Seeker package didn't have the particular application Bristol-Myers wanted, the pharmaceutical and sonal-care products company built its own front end using Hypertest Markup Language and JavaScript But the comdebulence which can connect to multiple back-end databases, because "developing

the database is a lot of work," Wagner As companies increasingly seek to take advantage of their intranets for more important purposes than merely porting information, the market for

automate some functions and perform transactions is expected to grow during the next few years.

International Data Corp. in Framine ham, Mass, predicts that the worldwide human management/payroll software market will grow by 19 7%, to \$4.8 bil-

Several of the major enterprise re source planning application windors, including Lawson Software. PeopleSoft.

Inc. Oracle Corp. and SAP AG. have been delying into the self-service area But Tom Gormley, a sensor analyst at Forrester Research, Inc. in Cambridge, Mass, said some of the smaller windows that speculiar in it, such as Seeker and Bentana Technologies in East Hartford, Conn., mucht be better options because their products are built specifically for the intranet and those kinds of func-

Digital subscriptions

tions.C

CONTINUED FROM PAGE 41

lum by 2002

service people expect on the Web is pretty remarkable Although the Journal doesn't discuss specific revenue and expense figures, the investment has been considerable. Bak

er said. The site uses dual Ts Interne connections, multiple San Microsystems Inc servers and a staff of about 125 who provide around the clock news coverage and post stones from the print staff, the Dow Jones news service and Barron's

Overall, the Dow Jones business pub lishing unit earned \$210 million last year in operating profit As in the print world, the company or

three to five years to Running a major subscripprofitable. Baker said "The eco nomics of doing this tion site on the Web posts was not unfamiliar. Baker said. "If we do challennes such as authenti-

marazin

break even next year cating many users each time that will be better than a lot of inev printl publications out they access an article. Running a major subscription site on

the Web posts challenges that range from authenticating many users each time they access an article to balancing the needs of both print readers and "Webbrads" Many Internet sites have heavier traf fir than the formation one duly year tors. But there are added strains on the

Journal's system that most other systems don't have. Every time a user accesses an article, the system must recheck to en sure that person is an authorized sub-And because users pay for the service they are less tolerant of delays and out ages. "We're doing an immensely chal-

lenging thing," said Ken Ficara, deputy director of interactive development. User authorization is done in part with Netscape Communications Corp's publishing server software.

The Journal is looking for software that will better analyze the types of featurns that cortain lands of users like A lot of the analysis tools on the market "don't scale up." Baker said. "We would like to have a higher degree of understanding [of user traffic] than we do That's phase two of customer understanding

INFORMATION OVERLOAD pects its new Web publication to take. The Journal site includes articles from

international editions company profiles. personalization features and some archive searching But all that content created additional difficulties at the site

You don't have the news hole problem, but you have the preentation problem," Ficara said. A lot of dask storage makes it easy to offer lots of information, but that makes it tougher

for users to know what is on the site and "Now the challenge is to add better tools," said Neil Budde, editor at the Interactive Edition. For example, the print version of the Journal has a daily index

The Web version is warehable by company and industry, but some Web readers still want a darly index. Although that feature will be added soon. Budde said. "it seems to me to be a print way of look

ing at the world." D





wrk/grp

Java for Windows only

CONTINUED FROM PAGE 4

feature, depending upon your point of norwi, is its ability to quickly generate native Windows exe, dll and .ocx components 1++ further aids Windows-only developers with an object-oriented framework of Java Windows Foundation Classes (WFC) that they can use to wrap Windows' native application program-

ming interfaces But Java purists will say that separating I++ into a lopsided Windows and non Windows environment and limiting its most valuable features to Window goes against the machine-independen philosophy of Java. I agree Microsoft's stance is that to match the performance features and level of integration of apple cations written in C++, Java program mers will have to use native (Windows) operating system methods



++ 6.0's support for writing nat Windows components in Java saves time and reduces frustration, which could keep developers loyal to

last the saved time and reduced frustration that result from J++ 6.0's ability to create native Windows components in Java could keep developers loyal to Microsoft. But the package also delivers tools that will write platform-independent applets and generate dynamic HTML pages. Developers can set comruler ontions that disable support for Microsoft's proprietary language extensions.

A FEW GOOD FEATURES

Specific new time-savers that I liked include IntelliSense, a concept borrowed from Visual Basic As you key in code. you receive prompts telling you what the parset expects you to write next, thereby eliminating the need to remember the parameters of a particular call or method IntelliSense also does basic checking of syntax as you type. Fortunately unlike with Visual Basic, your flow isn't interrupted by an annoying message box if you type a syntax error 1++ merely underlanes the error with a ways sed line similar to that used for

spelling mistakes in Word. The to-do list, another worthwhile in novation, looks at the program being do veloped and lists all compilation errors and source lines that contain a comment starting with "//TODO." Thus, the to-do list reminds you what errors need to be

fixed and belos you find them. The featurn remotates source code and reduces development and maintenance costs If your project incorporates a form, you can use the WFC Designer to drag and drop standard controls on the inter-

face. Jee automatically generates the Java mology, due later this summer, before code to create components. Likewise, you can use the Designer to drag and drop controls onto a static HTML page. I++ will generate the required HTML source, saving you time

Desnite the many attractive features of J++ 6.o, I recommend that developer first assess Sun's forthcoming Java De-Group LLC, a consultancy in Croton, N Y velopment Kit (IDK) 1.2 and its HotSpo Java Virtual Machine and compiler tech-He can be reached at houldman it ibm net

making a decision Sun has hinted that JDK 1.2 will deleer improved cross-platform connectivity and increased stability, raising the posts

bility that HotSpot's performance will rival native Window compilers. (7) Millman operates Data System Service

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NEW YORK CHICAGO ROSTON HOUSTON PALO ALTO TORONTO WASHINGTON D.C. LONDON AMSTERDAM COPENHAGEN STOCKHOLM FRANKFURT LUXEMBURG VIENNA ZÜRICH MELBOURNE SYDNEY HONG KONG SINCAPORE TOKYO

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Don't let security slip

The Enterprise Network

LANs + WANs + Network Menegement

Briefs

not plans in the



Small firms automate caller data

· Call center software

By Matt Hamblen

REAL ESTATE EXECUTIVE Bruce D. Atlion has taken a lesson from the big corporate call centers. For nine months, he has automatically tracked incoming customer calls and monitored who has been called back and

how attentive his 15 sales agents are to customers Thanks to call center soft ware. 'I cannot lose a number or write it down wrong," said Aslion, vice president of ERA MRA Properties, Inc. in Marietta, Ga. "I can hold people, including myself, accountable for the substantial time we spend

Automating telephone call information is nothing new, especially for larger companies that track retail sales or service with sophisticated call centers, and lysts said. But companies can

on the phone."

spend millions of dollars to set un systems to link call center Calt center, page 50

▶ Year 2000 fixes could create vulnerabilities

> By Laura Di.Dio New Yoas

SECRETARY MANAGERS OF A PARKET Information Services Security Association conference bere warned colleagues they had bet ter participate in year 2000 projects or run the risk that emergency repairs will poke

holes in security plans Potential problems include the chance that was 2000 pro grammers may inadvertent) create openings in secure appli cations and the risk that organi zations rushing to hire year 2000 specialists will ignore

background checks and hire someone intent on industrial espionage or sabotage These are all very real scenarios," said Fred Trickey, infor mation security officer at Co-

lumbia University here. 'The biggest impact of the year 2000 issue on network security is the danger of unexpected and unanticipated security vulnerabilities that have occurred in the course of making systems and networks Yak-compliant. This is particularly true when upgrades



are done under pressure." SERVER SAFEGUARD Trickey, who hosted a session **Novell devices** administrators, is responsible for security at Columbia. He

reliability school's year 2000 project so he could have the last word on se-That involvement helps

By Laura Di Dio Security, page 50 NOVELL INC. has announced

Phase I of its Onon Clustering Server, which was designed to increase server reliability and untime. The company also unveiled

offer increased

its StandbyServer Many-to-One for NetWare, a stand-alone de were that lets one Net@are serv er to safeguard multiple servers. Server safessard, page 51

Features of Novell's Orion Phase I clustering technology include:

Automatic fall-over

Ability for two active NetWare servers to tal over for each other if

§ The ability of 16 Intel-based servers to work as a single system

Year 2000: Better to be safe than sorry

· Asset management tools help cover the bases By Patrick Dryder

NOT ALL NETWORK managers see disaster looming in the need to fix the year 2000 problem. Many just heed vendors' advice

That means lots of work, but they feel it is better to be safe than sorry. To ease the task a bit, some turn to asset manage ment tools that most bought to track configurations and document changes.

"In our exper some routers get stuck in an endless loop trying to process the new date, then reset them selves * said Ed Warnke, senior network engineer at Republic nal Bank in New York. All financial institutions must fix



ems this year per fed eral mandate, he said, because

"if the network goes down, usiness stops." For Republic National Bank preparing the network requires software upgrades to about 100 out of 400 routers and

memory in 50 units to handle new software. Another 50 oldermodel routers must be replaced entirely because they can't be A World Wide Webbased or

curity matters.

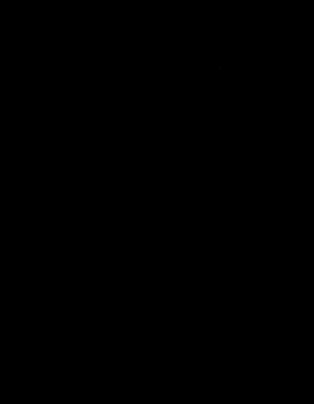
said he made sure he got involved in some aspects of the

source management tool from Cisco Systems, Inc. saves immeasurable time and trouble by examining the bank's Cisco de vices and comparing their configuration with compliance renorts on Cisco's Web site. Warnke said. "I lose sleep doing

the upgrades on Saturday and Sunday, then worrying about changes," he said. The normal process of maintaining current software versions or replacing network gear may cover many year 2000 problems, said Darwin Tolbert, a senior consultant at Renais

Year 2000, name 5

to uperade essential network



The Enterprise Network

LANs + WANs + Network Management

Briefs

budget plans in the next year



- # Will remain the same
- # Will decrease

Sese: 413 IS managers; mergin of acres +/- 5%

marce Computer Security Institute, San-renthins Zone Research, Inc., Redwood Cit

HP ships hig switch Alto, Calif., has int Curve Switch Socolf, a 10 slot LAN switch that can sug t up to 80 switch net and Fest Ethern ions and 10 Gigshi met ports. Its total be idth is 3.8G bit/sec. Pro

Web security

net access software that ed to log in only once g their misting Windows user identification and d. As they make sub

user license starts at \$5,0 for the Web Defender tick

· Call center software Small firms automate

caller data

REAL ESTATE EXECUTIVE BRICE D

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Security, page 50

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source management tool from

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a sensor consultant at Renais-Year 2000, page St



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Talk money, not technology, in switch hunt Call center

If jargon confounds buyers, money talks

De Rob Widder

RATHER THAN NUMT for the most advanced switching features, users are shopping for switches based on price because they say the devices are becoming a commodity.

Vendors are trying to differentiate their products in users' minds, but they are struggling use they emphasize comolex canabilities with technical jargon that is lost on informatems managers who don't have deen technical roots. Cabletron Systems, Inc., for aple, offers SecureFast Virtual Networking, a virtual

networking scheme that uses proprietary routing to support te creation of virtual LANa The wendor has been oushing SecureFast since the mid-sonor with limited surrans

Unlike in the past, when Inc. pioneered switched Ethernet technology that was much faster than the competition, the major vendors

are on a par with new develop-Recent announcements focus almost entirely on cost (see

chart belows What I see is a focus on ommodity networking," said

Tom Nolle, president of CIMI Corp., a Voorhees, N.J., consultancy. Vendors want to sell a better switch, not a cheaper switch. But they've made feature differentiation almost impossible by emphasizing techni-

cal differences, and that's what's forcing prices down The only thing that makes one switch stand out against another from the user perspective

is the quality of the network ment software - mainly the ability to actively manage a network according to preset rules or policies, said James Wiedel, director of networking at the University of South California in Los Angeles. But all the major vendors have or are working on those, too, he said.

Chuck Benton said he isn't

24-port Workgroup Fast Ethernet Switch

SuperStack II Switch 3000 Layer 3 switch (24 10/100M ports, one Gigabit Ethernet po

PriendlyNet four- and eight-port Ethernet switcher

24-port Fast Ethernet module for SmartSwitch 6000

16-port First Ethernet module for SmartSwitch 6000

SWITCHES: MORE BANG FOR YOUR BUCK



totally convinced that switching has become a commodity "It's beginning to look that way, but we need to give [the marked more time to see if that actually happens," said Benton, special projects team leader a Nevada Power Co. in Las Vegas Benton said software ad-

\$208 per port

\$333 per port

\$406 per port

\$399 per port

\$69 per port

\$200 per 10/100N port

\$199 per 10/100N port

\$1,899 per Gigabit Ethernet port

vances may stave off commodity atatus. "And as far as feature can definitely see where man agers with more of a business entation] could get run over by the technology [language] associated with [new] features, he said D

software

CONTINUED FROM PAGE AT

agents to customer databases. Ailion and a growing number of executives at small and midsize companies can buy less exsive software to set up some call center functions. Such soft ware - perhaps \$60,000 for 300 users - is attractive to firms such as real estate agen cles or car dealerships that might have several branch of es with small groups of work ers, analysts said.

Ailion has used Call Com mando from CTI Interactive. Inc. in Atlanta since August to combine the caller identification provided by the phone companies with his database. The system can expand to 1,000 users. which gives Ailion plenty of room for growth. Though he has 15 agents, he installed an eight-user version for \$495 because usually only half agents are in the office at any

Ailion can combine the database created with CTT's product with one of several sales force software tools to track customer information, including a complete history on a hot prospect.

TRACKING CALLS When a call enters or leaves the

company, the caller's name and address are logged immediately. And Ailson can access that information on his PC. At the end of the day, he can track who has been called back. And when a call comes to on another line. he can see who is calling and decide whether to take it. He has already used the software to track some unnecessary calls by agents. "A couple of people left the company after they realized I could see they were making personal calls, one of 40 minutes to San Francisco." Ashon said. "I can filter out time-wasting calls and sort out my known clients from known time-wasters. A known client's

call is worth more than money. A big value of an automatic tracking system to a real estate firm is that it provides documentation; to receive a commission, agents must sometimes prove they have made efforts on behalf of a client.

Others with products in the field include AnswerSoft, Inc. in Richardson, Texas, and Multi-Call. Inc. in Santa Clara. Calif. said Ken Landoline, an analyst at Giga Information Group in Santa Clare II

Don't let security slip

ProCurve Switch 8000M

ProCurve Switch 8000M

ProCurve Switch 1600M

match the needs of year 2000

as and security, he said ere is a real danger that mod ifying date codes could have nded consequences to totally unrelated applications

and routines." Trickey said. He cited the example of a bank that made a "very minor change to an automated teller ne (ATM) routine. The next day, the ATMs deducted

Abby MacLean, technology ger at RAMS-FIE, Inc., a nent subcontractor in

Gaithersburg, Md., said that if businesses let certain aspects of their year 2000 planning slip, they may decide to loosen security to speed year 2000 igration.
"That's bad because the back-

er community will be searching for opportunistic YaK vulnerabilities come Dec. 31, 1999 you can bet they won't he at

New Year's Eve parties," she said. "It's hard enough to defend against malicious attacks with intrusion detection mechaans in place.

off your networks to facilitate year 2000 upgrades is like going on vacation and leaving all your doors and windows open." MacLean said. She said managers "stand liber ground with uppe management on why you need to keen security access control rights in place and not allow em to be stripped simply to

make it easier for year 2000 ogrammers to upgrade a purticular application. POTENTIAL CONFLICTS Many users at the conference

said they hadn't considered the variety of ways in which year oo initiatives could conflict

Taking security mechanisms with existing security policies "It's a real wake-up call." said Rochelle Hill, assistant vice

possident of information technology at Sotheby's, Inc., an in-Hill said based on what abe had learned at the session, she will sit down with her col leagues and write a plan that outlines the dangers of letting

security take a backseat to year 2000 issues. That plan includes actively working with year 2000 roject workers and policing em when and if necessary The network and the job I save may be my own." Hill

Covering year 2000 bases

Tangram's Asset Insight tool tracks

the hardware and software configura-

tions of stations and distributed servers

One new module can discover network

devices as well, and the other can gener-

ate reports about year 2000 upgrades

CONTINUED FROM PAGE 47

sance Worldwide, Inc. in Newton, Mass.
For example, half the devices in the
huge network for one of Renaissance
Worldwide's clients need changes. Tolbert said. "But that may not be true in
six months due to their high turnover of

equipment," be said.

Consultants on that project ran an inventory of routers and switches from several vendoes using network documentation software from NetSuite Development Corp. in Wayfand, Mass. They then

several versions using network occurrenration software from NetSuite Development Corp. in Wayland, Mass. They then compared the findings with versions' compliance reports, Tolbert said. To automate that network evaluation

To automate that network evaluation process, Tangram Enterprise Solutions, Inc. in Cary, N.C., will ship two new options for its asset management software this work

Server safeguard

CONTINUED FROM PAGE 47

Orion Phase I supports two nodes.
Other features include automatic failover protection. In the event of hardware
or software failure on one server, the
other server takes over network operations without disrupting services.

Orion Phase I also incorporates support for two active NetWare 4.11 servers. That obviates the need to install a separate, inactive server for backup protection. NetWare's chief rival, Microsoft Corp.'s Windows NT Server, has similar features in its Cluster Server. Like Orion. Cluster Server supports two way full-over

in its initial release

But several users gave the technological edge to Orion. 'Orion is a musch more effective solution for a multiple server production network,' said Josh Turiel, information systems manager at Ad Life Marketing, Inc. in Boston. By contrast, Microsoft's Cluster Server,

is "very basic technology that's similar to NetWare's Systems Fault Tolerant III with a shared disk. ... You can duplicate Microsoft's clustering technology on any operating system today using third-party products." Turiel said.

Orion Phase I, with support for two servers, will ship at the end of next month. Pricing will be amounted at that items. StandbyServer Many-to-One will be available later this month for \$6,999. D

will be featured in
COMPITERWORLD
May 25 in print and on the web
Desdinc: May 27 it 3 you

and other modifications needed by each piece in a client/server network. For one bank, though, following vendor advice is frustrating because compli-

ance seems to be a moving target.

"All our network pieces are certified to be compliant, and they pass date-advancement tests in the lab. We don't foresee any problems beyond a wrong time stamp in a log file, said James Brown, senior vice president of network.

operations at NationsBank Corp. in Charlotte, N.C. "But the vendors keep coming back later, telling us to change firmware or upgrade software to make their product 'really compliant.' So we have to start again."

That means 'double and triple work, but it's a process we have to go through,' Brown said. 'Come Jan. I, I don't want to be the only one in the orsonization with a problem.' O

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TANDEM

Software

Briefs



By Randy Weston

A NEW DATA MARY at Great West Life and Annuity Insurance Co is letting staff analyze data they wouldn't go near in the past because it was buried in a main-

*Our company has grown to the point where we need to do a national rate review, and we have something like 130 regions to segment," said Mark Locke.

chief technical officer at Great West's employee benefits prodnet district

"With the old system, we figused out it mould have taken to

The \$150 million division in the past two years has doubled the participants in its managed care program from 159,000 ers in 1994 to 150,200 in 1996. It operates in 49 states, Washington, Puerto Rico and

hours a day for 23 days to do 2 national rate review. Now we can accomplish that task in 20 hours," Locke said.

the benefits the Englewood, Colo., company is reaping from its a-month-old Oracle Corp. data-

That is just one of ISSUES

base. Great West is using an Oracle's database to build the data mart for the benefits divi

Users pick PCs over terminals

By Craig Stedman

USERS TRYING TO RELIEVE their software support headaches may be buring in to Oracle Corp 's network computing vision. But they aren't all buying network computers

For several companies that are chanting Oracle's mantra of server-based applications and World Wide Web houses clients. PCs still have a hold on

the deskton Falling PC prices and a linering need for nonbrowser applications make it impractical to switch to network computers,

technology managers said. "We don't have many applications that would work on a

puter," said Lane Nordquist, chief information officer at Select Comfort Corp., a bedding

Windows NT not a major player - yet

By Sharon Goudin

DESPITE MICROSOFT CORP.'S Herculean push to move Windows NT into the enterprise, some industry watchers say it will be several years before NT can too

off its iumior-level status "Microsoft has been working very hard to show Windows NT as a major player, but it's an ur ban legend," said Dan Kusnet zky, an analyst at International Data Corp. in Framingham, Mass, "I don't see NT moving out of the junior position for a

Windows NT Server is goin up against Unix and main frames, both of which are dug into primary roles in the operations of large businesses.

Microsoft contends NT is oming on strong and working its way into major compani But analysts said Unix machines and mainframes are still running business-critical appli-

They, not NT, are running

A survey of small to large spanies found that 60% of NI users use it for file and print services, Kusnetzky said. not to run mission-critical appli

Oh, I wish I had a better invoice system

Oscar Mayer parent saves by automating taxes, other processes

By Resh Cale Gomelek

for processing invoices that is expected to save the company \$3 million over the next three years. The food conglomerate, the Kraft, General Foods and Oscar

deployed the appli-

costs associated with paying an invoice from more than \$7 to about \$4. Productivity is up by 10%, and customer service calls are answered in three minutes

instead of 15 signed to improve productivity by eb ninating paper cutting out unnec-

essary steps and routing high-priority tasks to certain But Kraft's proj

ect has succeeded because it ties in

Kraft automates invoices

company's three legacy ac-

there, you may not know which ones are a priority," be said.

invoices more uniform, said

Yolanda Freelon, so accounts

to process an invoice is not

there, the system kicks it out as

an error, and we are able to re-

ject that invoice back to the re-

The system automatically

*From a control standpoint.

we were able to apply consistent

do before," said John Helmerca.

Kraft's director of finance and

The application "has given

renewal lesies that we couldn't

If all the information needed

payable associate at Kraft.

quester," Freelon said.

"Once [the invoices] were in

counts payable systems.

piers. Kocanda said

CONTINUES FROM PAGE 53

tion, audit control and tax compile up for entry into one of the

altance - that once slowed down accounts payable, company officials said. Connie Moore, ar analyst at Gigs Information Geoup in Norwell, Mass., said the project

sm't a typical accounts payable Giga recently gave Kraft an excellence award for the application at Guza's Business Processes and Knowledge Manage-

ment conference. TAX TABLES

They've extended the application) to other business process

es " Moore said. For example, the system automatically calculates and adjusts taxes according to a table maintained by the tax department. said Bernie Kocanda, director of

the Kraft Foods Shared Services Center in San Antonio In the past, tax experts often would be asked to manually calculate taxes, which slowed

things down Workflow functions also let Kraft prioritize invoices based on due dates. Kocanda said. Traditionally, invoices would

Trade secrets

And paying bills according to their due dates allows Kraft to negotiate better deals with supwhat is long The workflow system also makes the rules for processing

unil do. "Then we get it on that from manage and the users," spid Me

prints a copy of the invoice and me the ability to track the ina letter that lists what errors vosces received through the enneed to be corrected before that tire process, especially those that are problematic," said invoice can be paid, she ex-Robin Mask, an accounts payable associate at Kraft.

*Research on possible duplicates, old invoices and problem invoices is done at my desk instead of digging through rows and rows of file cabinets," she

IBM enhances its **MQSeries middleware**

By Jaikumar Vijayan

IBM IS ENHANCING ITS MQ-Series messaging middleware with features that will let users access applications and data on other types of computers, no matter what environment they use themselves Delta Air Lines in Atlanta is

using MOSeries in a massive application integration project aimed at giving planners a detailed cross-company view of operations ranging from passenger billing and reservations to aircraft maintenance and crew scheduling.

That information has been widely scattered across multiple platforms and scores of systerns, said Mark Whitney, director of middleware at Delta

weave all this information to pether," he said. "It is becoming the backbone on which we are running the enterprise."

Such capabilities are at the core of IBM's bid to expand the use of MQSeries, a mainly mainframe-oriented messaging technology installed at 4,000

sites worldwide, said Colin Os-IBM's middleware business The capabilities are enabled things flexides the Oracle appli by the addition of the MOSeries Integrator, a sort of hub to which all applications in the en-

terprise are linked. Messages and requests for data pass through that bub and are transformed into formats understood by all other systems before they are automatically routed to wherever they are needed.

The technology works for just about any system - including Windows NT, Unix, 18M's MVS, the World Wide Web and corporate applications such as those from PeopleSoft. Inc. and The Chase Manhattan Bank

Corp. in New York is using IBM's middleware for a client integration project aimed at gre ing users across the company unnform access to data and resources. Chase is using the technology to integrate internet browsers, Windows NT client *MOSeries will allow us to software and Lotus Notes on PCs across the company said loe Gendler, a vice president at the company

IBM also has added Flow mark, a workflow management tool, to MQSeries, so companies can track and collect data on business processes and prac tices across snultiple platforms And IBM is offering a new set of services called MQiStart borne, general manager of to help users in the actual application integration. MQSeries is mallable now Entracked price ine starts at about \$50,000 for

an NT-to-mainframe setup. []

human resources systems. Oracle apps and PCs used together CONTINUED FROM PAGE 53

"And if you can buy a fully functional PC for a couple hundred bucks more than a net work computer costs, why not

do n?" Nordquast asked Select Comfort in the fall plans to install thin-client versions of Oracle's packaged ap-plications. That will replace the fat-client approach if uses now

- a three-tier setup based on Oracle's Network Computing Architecture (NCA), Nordouse mid NCA's big attraction is that it

will let the Oracle applications be installed and uperaded centrally. Nordquist said. But Select Comfort's users still need full PCs for apolications such as spreadsheets,

word processing and analytical querying, he added. NO JUSTIFICATION

The same holds true at Onsale, Inc., as Interpet-based auction house that plans to switch its Oracle financial applications to a server-driven NCA approach late this year.

PC costs are low enough now that Onsale's standard desktop box is a Pentium II machine with 128M betrs of memory. said Alan Fisher chief technical officer at the Menlo Park Culif

"I just don't see the justification for buying network comouters," Fisher said, "You might save \$400 on a machine, but big deal. And people here use is muchines for less of other

NCA was announced in late 1006 but many users still consider it to be a futuristic idea

ICW, May 11] For Oracle, it is an attempt to oosen Microsoft Corp's into grip on the desktop by moving processing to application servers (see chart). But even browser applications

need enough memory and disl space to cache data so users aren't constantly battling network traffic, said Carl Olofson, an analyst at International Data Corp. in Framingham, Mass "A thin client isn't quite as thin as you might suspect," he

Ray Lane, Oracle's president last week acknowledged that network computers aren't tak me off in the business world He said that doesn't bother the Redwood Shores, Calif., com-

"In the corporate market, the PC is mutating into a network computer." Lane said. "We don't really care (what is on the desktopi. What we care about are the

Data mart saves time

sion, which oversees clients' employee bealth benefits pack ages. The actuaries are looking at and trying to predict future rates of claims based on exist ine business and amounts of claims we receive. [Then they arel slicing and dicing those figures based on our membership characteristics such as age, region they live in, etc."

CONTINUED FROM PAGE 53

That job previously was done by homegrown applications that combed through old mainframe applications. That process evenerated "literally thousands" of output files, which the staff ignored because they couldn't possibly have read through

them all, Locke said. "It was almost unn for a human," he added. Locke said his team persuad-

in a system that could grow with the company. *Our argument was, if we understand where we are going and what technology we need to take us there, then let's spend the money to go there." Locke said. "Enhancing the old stuff might have achieved the busi-

ness goal, but it's money speed on fixing a problem. And next year you will spend more money to fix something else." The \$175,000 investment is giving Great West actuaries ac-

cess to reams of information. "Now that we have it up and running, it makes our life a lot easier," said Doug Stefanson. vice president of employee ben-efit products. "We have much better and quicker access to information and the ability to sort data in a much more efficient

manner."D





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SCO's Tarantella increases access to applications

By Jaiksmar Vijayan

sco, noc.'s recentry releases version of its Tarantella technology increases the number of operating environments from which users can access crucial business

applications via the Web.

The company's latest announcement comes on the heels of a major upgrade of its UnixWare operating system and is an example of how SCO hopes to differentiate itself in the face of increasing

entiate itself in the face of increasing competition. SCO, a leader of Unix that runs on Intel Corp. chaps, is under tremendous pressure from Windows IT among its traditional small-shop base. So it's be-

ginning to focus on the high end.

Tarantella is a server-based technology
that at a basic level lets users access
Unix and other proprietary server applications via the World Wide Web using
any Juva-enabled client.

Enhancements in the latest release, Version I.I. include the ability to use any Java chients to access applications on machines that run IBM's AIX and Hewlett-Packard Co.'s HP-UX.

Also offered for the first time is the Cleo Connectivity Pack, an option that lets users access 18M mainframe applications from any Java-enabled client. Those kinds of capabilities give more

cations from any jara-enabled cinest. Those links of capabilities give more users access to crucial companywide applications and will let administrates contrally manage and deploy applications, said Robert Celimes, a technical fellow at AutoZone, Inc., an automotive retuiler in Memphin. Thramiella could be a big winner for users, who want to open up their server data to a wider number of users, he taid. Technologies such as Tarantella are going to be crucial for SCO in the coming months, observers said. SCO's traditional base in small Unio

SCO's traditional base in small Units shops, as well as in departmental and workgroup applications, is coming under tremendous pressure from Windows NT. The company's response has been to move its development focus to the high end, particularly around latel Corp.'s

forthcoming Merced chip.

"But even here, SCO is going to face significant competition from Unix vendors who are shifting their development focus to Merced," said Tony lams, an analyst at D. H. Brown Associates, Inc. in Part Chetter, N.Y.

That means users who have long relied on SCO to deliver Unix on Intel will suddenly face a wide range of options from deeply entrenched Unix players such as HP, Sun Microsystems, Inc., and

Digital Equipment Corp., lams said.

That could pose a major challenge for SCO in the coming months, admitted the company's newly appointed CEO. Doug Michels. "We have a fight, but we also have 80% of the Unit [on Intel] market." Michels said. "And we are the

Unit of choice for vendors like Compag-IBM. Unitys and Data General.* Michels stock over from former CEO Alok Mohan last month as part of a maper recognization of SCO3 sales, marketing and development teams in a bid to make the company more competion. Most of the immediate focus of the com-

Most of the immediate focus of the company will be on delivering a 64-bit version of its UnixWare operating system for Merced, Michels said.

"I've didn't think there was a challenge we wouldn't have reorganized. But

s. Merced represents a buge opportunity for us," he said. II

Windows NT not mission-critical

CONTINUED FROM PAGE 53

on. Kent Polzin, director of applications and systems support at Simmons Co. in Adants, said by a installing Windows NT to run some PeopleSoft human resources applications, but he has no plans to replace his IBM AS/400 system. "It doesn't scale. It's not stable and it's

"It doesn't scale. It's not stable and it's not secure enough." Polzin said. "Our business has changed quate a bit since we installed the AS/400. We've gone through a tenfold increase in processing, and we couldn't have done that with

Tom Bittman, an analyst at Gartner Geoup, Inc. in Stanford, Comn., told an audience of corporate users at its NT Strategies Conference last week in San Francisco that péople shouldn't consider adocteine NT Co., which is expected to

come out next year, until at least one service pack is out — and that will be sometime close to 2000.

And both Bitmans and Kunnetchy said date-change problems to make any major installations. 'N? 6 o should be out in time for people who are finally shopping after they get beyond year 2000 problems.' Bitmans said.

Kalman Shor, director of Si M Michael Aarthooy Jewelers in Mount Vermon, N.Y. said he worth make any major moves for several years. Wh've evaluated NT to see what we smanfel to do after we get past year 2000 projects. Shor said. "Am I vaning with based bresh!" I don't think so. And I'm sick and stred of Moure. Don't bother me until you've got something for me to use. "DI use." "DI us

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Briefs Nabisco cooks up storage savings

Digital linear tape costs less, stores more

By Nancy Dillon

IN 1996, HABISCO, INC. PEVOÎD tionized the national system it uses to confirm delivery of its products by consolidating 114

scattered, paper-based invoice archives into one networked store of MANAGEMENT document images Nabisco's proof-

of-delivery document manage ment system cost \$700,000. said Alex Soo, systems manage for customer financials at the Parsipparry, N.J.-based company It is expected to pay for itself in

the next two years *Payment reconciliation used to take anywhere from a couple of days to a couple of months. New our associates can re-

trieve an image in less than 15

seconds and then press a butt to have it faxed out while the

customer is still on the phone," When the new system's 168G-byte optical storage jukebox overflowed in the first 18 months, the DOCUMENT snack-food giant walized reform

watn'i own The sheer number of 2.6G byte magneto-optical discs required was becoming prohibitive, Soo said. "Our jukebox could only hold three months worth of data, so we had two operators spending several

hours a day mounting out-of-Each day Soo's group scans in about 35,000 signed invoices Babisco, page 61



Management group eyes standards PalmPilot

Unifying information is goal of new leader "End users need to demand

тия разктор Management Task Force has a new leader in the form of Winston Bumpus, a network architect who said one of the group's top priorities this war will be unifying manage

By April Jacobs

The DMTF develops open standards for desktop management. For users, those standards are the basis for tools aimed at reducing support headaches - and lowering

hardware and software that is developed with manageability. said Bumpus, who works at Provo, Utah-based Novell, Inc. He noted that many user management issues are caused by having more than one application managing a mixture of hardware and software.

What we want is more flexibility," said John Delta, director of operations at the Washington-based Nasdaq Stock Exchange. At fast-naced Nasdao. which has some of the latest

DESKTOP STANDARD ALPHABET SOUP

technology on the desktor users don't want to sacrifice performance for manageability Delta said. But managing out side the corporate standard car

The DMTF is trying to ease systems management with its Common Information Model (CIM), which would present a uniform picture of hardware cial to managing it. In February the DMTF released CIM Ver-sion 2.0, and in April it released the development schema. That

means CIM-based management systems should be appearing later this year.

The nest step for CIM. Burnou said, is to allow network man agers to exchange information between systems management applications in a uniform way The DMTF is eyeing the Exten sible Markup Language, origi-nally designed for database and World Wide Web publishing, as the protocol vehicle

Right now, most systems ad trators use the Distributed Management Interface (DMI)

users get Web access

By Kim Girard

WHEN SILL SIDERMANN, VICE president of advanced development at Chromatic Research, Inc. in Sunmyvale, Calif., travels

to South Kores or Isnan he needs little more than a «Com Corp. PalmPilot to per his work

attaches Apple Inc's New

keyboard answer E-mail. He works on spreadsheets from the company's internal web site and tracks status reports, budgets and other company information on the Pilot. Now, because of software and partnerships to be anaced this week, he can even

use his Pilot to update informa tion on his company's web site and keep a list of bookmarks to

Users stay connected

CONTINUED FROM PAGE ST

neiwe stories from World Wide Web sites while traveling. That software is from San Mateo, Calif-based AvantGo. Inc. Its desktop and client prod-

sart work together to provide socialized Web content on the Pilot, IBM's WorkPad PC Comnanion and Microsoft Corp.'s Windows CE devices.

Now, 'I don't have to look for the information," Bader mann said. And without a note book PC, newspapers and paperwork to tote on the road 'I'm not hauling around 15 ex

AvantGo this week an nounced that it has teamed with a half-dozen news providers including The New York Times Wired Digital, The Sun Jose Mer cury News and Excite - to provide content customized in a smaller format, with or without

graphics, for palm-size devices. After a so-called channel is rested between the AvantGo desktop and client to the Web

ly updated every time the user pushes the synchronization but

ton on the Pilot, WorkPad or Windows CE device With the software, users can synchronize any information from a corporate database or

the Web, including sales fig urre, heading news, call reports and customer logs HELDS HORE USEFUL AvantGo's application makes handhelds more useful to corporate workers who demand

more than expense-tracking applications and to-do lists from these devices, said Mike McGuire, an analyst at Dataquest in San Jose, Calif. 'AvantGo figured out a while ago that the important data on

a company's network servers, or idatal being fed into the servers from the field, doesn't have to be accessed by, or sent by, highend notebook devices," he said. Ed Cushing, a research sales-

What: AvantGo Desktop and AvantGo Client, sold as a bundle

Cost: \$49.95, for a limited Available: AvantGo's Web

site at www.avantgo.com * Free trial is now available, with

software expiring Sept. 1. Also, free introductions version of Avantico in included with 3Com's Paim III.

man at Lazard Freres and Co. an investment bank in New York, tracks his customers and their holdings on the Pilot. He has customized his Pilot to regularly update stock market information and recent news "It's very easy to hit |the sync

button on the Piloti, and on the way home I can read details of what the market did on that day," Cushing said. Colleagues avoid printing

designed for database documents by using their Pilots and World Wide Web to share information about companies they are writing reoublishing, as the ports about, Cushing said. Nothing works as clean or easy protocol vehicle. or this " he said !!

Task force eyes standards

CONTINUED FROM PAGE 59 protocol to gather desktop infor-

The use of CIM will allow all

The DWTF is eyeing

the Extensible Markup

Language, originally

dors also have to work harder to make their tools work together. mation - such as drivers and Vendors are making progress, peripherals and operating system versions - and the Simple best slowly For example, Microsoft Network Management Protocol

Corp.'s Zero Administration for network-related information. The difficulty users face is for Windows, an operatingthat the tools used to present system-embedded tool for remote troubleshooting and soft this information vary from ven-

ware distribution, works with DMI-compliant machines. But how it fits into a larger that information via both protomanagement tool kit, such as cols to be presented in a single Rochester, N.H.-based Cabletron That should make life easier, Systems, Inc.'s Spectrum, isn't

said analysts and users, but wen-On the server side, users rate managrability low in compari son to factors such as reliability. price and performance. But they want the tools that perform the task to be vendor-neutral, said Jame Wright, an analyst at Del-ran, N.L-based Datapro.

One reason for the lack of in teroperability is that hardware and software vendors initially waited for the other camp to come out with tools to solve problems, Bumpus said. O

PACKARD

Microsoft

Packard Bell to close two U.S. facilities, cut 400 jobs

By Nancy W

FOR MONTHS after denying published reports that the company planned layeffs to reduce costs, h Packard Bell NEC, Inc. amnounced last week that it is

nounced last week that it is indeed cutting 400 jobs in the id. S. and closing facilities in Fife. Wash, and Bosboro, in Mass., to reduce costs.

The NEC Versia notebook manufacturing operations in Type field and the inside sales, customer service, technical support

and engineering duties handled in Boxboro will be moved to headquarters in Sacramento, Califi, the complany said in a statement. About 300 employces will be moved to Sacramento under the consolidation. Server and notebook engineering work will remain in the Boxton area. The consolidation will be finished by year's end and will affect only U.S. facilities and employees, the company said. Packard Bell NEC worldwide

has 8,000 workers.

The done's held Packard Bell NC. is expected to make an initial public offering (IFO) this year or next, and the consolidation is a signt that the company in 'typing to get their fincal and manufacturing bouse complete'ry in order before they consider doing the IFO, 'sail Call Howe. director of computing strategies at Forrester Research, Inc. in at Forrester Research, Inc. in

Cambridge, Mass.

PROFIT PRESSURE

Packard Bell NEC doesn't reveal

its financial results but is widely believed to be operating in the ced. Its market share has steadily slipped, and published reports have said Packard Bell Sovice in Boston

NEC is under pressure from part-owner NEC Corp., based in

part-owner NEC Corp., based in Tokyo, to turn a profit. In December 1997, a Japanese newspaper reported that NEC Corp. officials were presuring the ailing U.S. division

to lay off a coo employees.

At the time, a company spokersworms told Computer-world, "We haven't been planning any layoffs. ... We're not making any plans for specific cutting measures." The spokersworms did admit the

spokerwoman did admit the company was being pushed to make a profit, at least partly because of plans to go public. Beny Alagem, Packard Bell NEC chairman, CEO and president, said in the statement that

the consolidation will lead to better efficiency and improved productivity. O Well series for the IDG News

Nabisco cooks up savings

sent from the 114 product-delivery branches. The documents are indexed by date and invoice and stored for as long as possible because about 5% of all orders eventually need proof delivery to secure payment.

oraneey to secure payment.
The group looked into buying
a larger jukebox, but Soo said
that when he factored in price,
speed and functionality, a new
yT-byte digital linear tape (DLT)
library from Storage Technology
Corp. in Louisville, Colo,
proved the best choice.

proved the best choice.

The library uses 35G-byte
DLTs and will eventually hold
to years' worth of data. The lot
est mainstream magneto-optica
discs, by comparison, can store
only up to 5.2G bytes each.

only up to 5.3G bytes each.

The tape library is now connected to Nabisco's Windows
NT-based document management system wa middleware
called Application Storage Manager (ASM). ASM lets SuoneeTike robotic libraries apoeca

ager (ASM). ASM lets Storage lek robotic libraries appear as logical disks on a network, directly accessible by front-end the rep

applications.
StorageTek announced ASM to document management users at the Association of Information and Image Manage-

TAPE WIRE

Tape is the cheapest storage medium available, so it isn't surprising that large document management installations might choose it over optical medius for traditional optical roles, said John McArthur, an analyst at International Data Corp. in Framingham, Mass. Especially

al to look like disk.
In a report by Strategic Research Corp. in Santa Barbara, c Calif., high-availability tape systems, such as IBM's Magstar MP tape libraries, are changing

user perceptions.

In addition to backup and disaster recovery, tape is increasingly used for near-online active processing, according to the report. O



INTERGRAPH COSP. has announced the TDZ 2000 GT1, a high-end workstation for visual computing on the Intel/ Windows NT platform.

According to the Huntsville, Ala., company, the workstation is powered by one or two 400-MHz Pentium II processors from Intel Corp.

It has a new multiport architecture of RAM, a 4.3G-byte hard drive and

that incorporates three Peripheral Component Interconnect buses and dual memory controllers to offer I/O band width close to IG byte/sec. Two- and three-dimensional graphics options also

are available.

Pricing starts at \$6,930 for a workstation with a single processor. 64M bytes

three-dimensional graphics.

(205) 790-2000 www.intergraph.com

NIACN PC COSP. has announced Vision-Book Pro 7330 and VisionBook Pro 7350, notebook computers that feature Intel Corp.'s Pentium II processors. According to the Milpitas, Calif., company, VisionBook Pro 7330 has a 233-MHz Pentium II processor and a 3.26byte hard drive. VisionBook Pro 7530 uses a 266-MHz Pentium II processor

uses a 266-MHz Pentium II processor and a 4G-byte hard drive. Both models can also feature integrated modem and LAN support, and options such as a 24-speed CD-ROM or DVD-ROM drive or a Zip drive from

Iomega Corp. Pricing for VisionBook Pro 7330 starts at \$2,999. Pricing for VisionBook Pro 7550 starts at \$3,999

Hitachi PC (408) 546-8000

RUNGSTON TECHNOLOGY CO. has announced TurboChip 233, a processor upgrade package based on Intel Corp.'s 233-MHz Pentium processor

Pentum processor
According to the Fountain Valley,
Calif., company, the package is a chupfor-chip kit that enables users of Pentium-based systems to replace their
Socket 5 or Socket 7 system microprocessors with a 233-MHz chip with
MMX technology.

To perform the upgrade, users remove the peocessor from the motherboard and replace it with the TurboChip. No additional hardware or software changes are

required. TurboChip 233 costs \$299. Kingston Technology (714) 435-2500

TANGENT COMPUTER, INC. has announced the Pendant TFT line of desktop PCs

with flat panel displays, ingame, Calif., company, the PCs' flat panel screens take up 75% less desk space than conventional monitors and can rotate 90 degrees to provide a choice of landscape or portrait

mode.
The Pendant TFT/233 has a 233-MHz
Pentium processor and a 12.1-in display.
The Pendant TFT/266 has a 266-MHz
Pentium and a 13.8-in. display.

A 333-MHz Pentium and a 15-in. display are standard on the Pendant TFI/333.

The TFI/233 costs \$1,795: the TFI/266 costs \$2,605; and the TFI/333.

TFI/abb costs \$2.0 is priced at \$2.995. Tangent Computer (650) 342-9383





What gives here?
IT execs and techies
are strutting
rad titles such as
director of reinventing
and code juggler.

Do they make sense, or is it just . . .





BY GARY H. ANTHES "Job titles are not very important at all," says Robert A. Zawacki, professor emeritus of management and international business, and technology and business integrators distinguished scholar in residence, at the University of Colorado in Colorado Springs, and president of Zawacki and Associates. "They are stilling — a carryover from the old, bureau-cratic organizations."

Say what? Enough handles to fill both sides of a business card and the professor is dissing job titles?

That apparent ambivalence is reflected across the high-tech landscape these days as some companies shrink the number of titles—or abolish them altogether—while others seem to in-

Janet Cleary at Outsell, Inc. is building an information database about information databases. She is director of content analysis, and she studies and catalogs commercial information services for the Burlingame, Calif., information consultancy.

Why not use the simpler and more common title analyst? Cleary, who crafted the title with her boss, says, "We thought it was important in the company to make it pretty clear who is doing what."

Jeffrey Fishman is a senior completion specialist at Complet

leather maris name (5

COMPUTERWORLD



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MONIKERMANIA?

CONTINUED FROM PAGE 63

ed Systems, Inc. in Vienna, Va., which specializes in rescuing runaway software development projects. (Motto: We Cheerfully Complete Your Computer Projects.) He says titles are important because they send a mes-

sage.
"The title acts as a marketing aid,"
Fishman says. "When I first say it,
people laugh, but it helps them get
the idea that we are really going to
help them get the job done."

Karen Dabaghian, former manager of demand creation at Informatica Copp in Menlo Park, Califf, says her marketing job was its convince companies they needed Information's data warehousing products when they didn't even know they had data warebousing problems. Too, did it open doors, 'she says,' 'I'd have people; call dold.' But the downside was that the title simply left some people confused, the adds.'

There are a lot of chief scientists around but only one at a bank, says Bill Finkelstein, chief acientist at Wells Fargo & Co. in San Francisco. He is in charge of electronic commerce research and development, an area Wells Fargo pioneered as the first — and now largest — lotternet.

"The title creates a good first impression — it adds a bit of mystery that can be quite exciting," Finkelstein says. He hesitates, then adds. "It does, however, seem to act as a magnet for salespeople."

Senior assecutives at American Especes Co. in New York debated for four months before deciding that Andrew Critanow was to be senior vice president for external enterprise management. "The challenge was, quite candidly, to stay away from the volutouring" word because that scares so many people off," Critanow says.

Ames created the position about a year ago to centraliste the management of outsourced business functions such as telemarketing, neither processing and even some customer service. It is more sensitive to outsource those things than, sa, cafeteria operations because they are such an integral part of the business. "We have gotten closer to the core than a lot of service companies," Cottunou acknowledges.

Critanov defends the time and care that Amex puts into choosing titles. "There are some 175 people in the senior management ranks at American Express," he says. "You couldn't put us in a room and, without the titles, know what everybody does."

Nevertheless, information systems management consultant Zawacki save many firms are "broadbanding" job titles to flatten the organization, enrich jobs and give top management

zation, enrich jobs and give to the control of the

less specialized titles but broader responsibility. A large comparly might go from having 35 job titles to as few as six, he says. The Bank of Montreal is doing just that. Mike Roberts is transition man-

ager in solutions and applications, and his job is to help move the IS organization from a traditional, hierarchical structure to one in which line managers with a myriad of titles give un those titles — and much of the

"Names of a 1.00" adopt one of just four "leadership" tides.

Scraying heavenly

The bank's 18

The hank's 15 leaders are resource managers if they handle 15 people innes, applusation portfolio
managers if they focus
on uters, project mainagers if they lead projects, and

ages if they lead projects, and business technology specialists if their job is to stay on top of new technologies. "We're getting away from the model of the tudditional line manager who wears a half-dozen hast manager who wears a half-dozen hast advantage is that each manager can focus on one key area — people, customers or technology.

chical structure to one in which line tomers or technology.

An employer at the bank — a proup those titles — and much of the grammer, say — now may have mulpower that goes with them — and tiple reporting relationships, taking

direction for project work from the project manager, and for career de-

velopment from a resource manager.

As a result, managers have less direct control over people. One of the things people struggle with is that these jobs are without positional power," Roberts says. "There has to be much more relatione on influence and negotiation." And that encourages people to be more entrepreneutal, be says.

But employees often resut such or ganizational flattening and elimination of job titles. Zawacki says. "Ho man beings have a lunge need for stability because the world is changing so fast. Their job title is something they can hang on to." he says-Jeffrey Christian, president and CEO of security requires from

thing they can bang on to. The says. Jeffrey Christian, president and CBO of executive excuting firm and CBO of executive excuting firm can be compared to the compared to the says a several from total works better in "fast growth. exciting cultures where everyone is getting stock options and making labs of money." People in those companies tend not to care so much about the status unggreed by traditional strike. It says to to care so much about the status unggreed by traditional strike, its says takes a strike event, and that is important if you want to be seen by potential employers as an upand-connect. Christian says.

If changing titles establishes a track record, then Kee at Seritural Health System in Norfolk, Va. is definitely in the race — one marked by milestones with the brendest of labels. He was director of continuous quality improvement. He then became director of continuous quality improvement and re-engineering.

Now he's director of reinventing.
Rice's job. To help ay liner managers integrate and streamline Sentrat's disparate services for homes.
doctore's offices, hospitals and nurring homes. "Director's probably too strong a word," he says. "I'm more a facilitator, coordinator and project leader. The reinventing departments is a support arm to help oppartments is a support arm to help op-

Human resources consultant Jane Weizmann, a semior consultant at Watson Wyt Worldwide in Washington, says defining fan or creative tities to present to the outside world is fine. but organizations also need more meaningful and standard labels

for employees.

"We need titles that tell us, as management, what skill sets we have. And employees need them in order to understand career opportunities." she says. "So I ace two sets of job titles — whatever you want on your business card and then a titling process that speaks to organizational

Anther is Computerworld's senior editor, secolal reserts.

need.*D

The world according to Netscape

House, New Age thise abound in Silicon Valley, where Horsevines are this and imaginations furths. For example, at Hotscape Communications Corp., these remos and thise can be found on offi-

OFFIRST WESSELLIN, CODE JUGGLER, writes C and C++ softuare and little to juggle clabs while his programs compile. OLES REPKS, SJACOS, works on the SJAINSE specification for secure E-mail and recently had a being.

NAMES MACCHINAL POSTMASTER GENERAL, works on the NAMES MACCHINAL POSTMASTER GENERAL, works on the NAMES MACCHINAL PROPERTY INC.

technical vehics, (Editor's note: The first three words are deliberstely crossed seet, and a substitute of the seed of the seed of the seed of the program mars who doesn't healthte to leak at the datafa.

Code juggler Weissensen says picking tilles at Netzcape has a cotain quality of one-symmethip, with each employee trying to find a meetine thirty code them the ment. Asked if the company reserves implificual tillas in extensed activities such as recruiting and sales, he says, "Yes sore power-laws, in some buring 145 dataloos, there are tilled life. The code of size of the code of the laws. The code of the laws of the code of the same there are tilled life. The code of size of the code of the same till the code of the code of





PETER G. W. KEEN

TO FIND GOOD PARTNERS. BE A GOOD PARTNER



hat exactly is a "partner?" What makes a good partner? Is your company's IS organization a good partner? The answers to those questions will be increasingly important to IS over the coming years because it's just about impossible for any firm to go it alone. To paraphrase Walter Wriston, a tions have no choice They must find pening reputation Vendors, in turn, wil

retired Citibank chairman, companies ust cooperate in the morning so that they can compete in the afternoon That's due to the two factors that now dominate every area of information technology: the shortage of skills and expen ence and the complexity of the enterprise technology base. No IS organization can go it alone anymore.

The two factors are interrelated, of course. The new knowledge and prover expertise have to soan fields that previously were separate areas of expertise, so the problem of complexity becomes

compounded Take a company in which logistics inregration strategy is based on SAP, plus links into large relational databases, plus data warehousing, plus object-based extranets. The company is looking at busi ness-to-business efectronic commerce and needs people who know the nuts and bolts of supply-chain management and logistics. It needs specialists in electronic payments, multimedia dynamic catalogs and, say, electronic data interchange standards for the transportation

IS can find people in each of thos areas, albeit with increasing difficulty as more firms go after the same basic strategy and thus the same basic talents. But how many SAP specialists know how to handle relational database management system integration? How many Java de velopers have in-death experience, say, in Oracle and DB2 and with meta data for data warehousing? If you know of any, so do a lot of headhunters. IS organiza-

a partner But what is a partner?

Partner can be a weasel word as used by some vehdors and IS when it says it wants to be a partner with the business. It adds up to little more than a new style of sales pitch - the same 'we love you. and you're our friend" babble that makes insurance company and bank commercials so nausrating.

A real nurtner is an organization committed to relationships as the foundation of its strategy, not products and individual contracts. It doesn't seek an edge in its relationships, but looks at how to give and to take - give information and expertise, take experience; give innovation, take learning; give continuity, take com-

What makes a good partner? An organization you can count on that is candid. meets commitments, stays the course and looks after your interests while it legitimately protects its own. Its people are rewarded for building and sustaining relationships, not for meeting quotas. That means the organization has built and sustained a reputation for partnership rather than making a rlaim for it now that purtnership is the fashion. It attracts

and keeps people who respond to and sustain that reputation. The customers who know how to be good partners will benefit from the skills have and the knowledge of how to mane complexity of the best vendors. "Best" here means having a proven part-

seek out the best customers. The equa tion is the same. Competitive edge from IT comes from people now, not technology per se. The people edge comes from a culture of openness and collaboration and a history of proven competence in and commitment to collaboration.

PARTHERSHIP QUIZ

In my experience, about half of IS units and half of vendors and suppliers are already out of the same Here. It's inappro priate for me to name names, but I can ask a few questions, and you can provide your own names for your partner rela honshins

Which vendors/systems integrators, consultants do you trust to tell you the truth and not play games? Do you play games with them - openly pitting them against one another on price, for exam ple? When a project is in trouble, which partners tell you so and don't hide it Which ones would you bet your job on Which ones have really skilled profes sionals, not some new hire who's 'The Expert" in a field where everyone is short of even semiesments?

Partnering is a real skill for IS - a skill in choosing partners and building and sustaining the relationships. But the bigger skill is being someone worth part nering with: Partnership is between peers, it's not a purchase order. []

Keen's book. The Business Internet and Intranets, was published in February by Harvard Business School Press. He can be contacted at peter@neterkeen.com.



From liberal arts grads to IS pros

on has begun working with

eral arts graduates into IT employees.

This summer, the first to graduates to take part in AU's new Turnkey Program will report to work at three local companies The new hires then will return to their aims mater intermittently for four to eight weeks of training in the specific

mation technology is their employers require The training curricula will be reloped jointly by the unirsity and the hiring compa es, delivered by AU faculty enwritten by the com-

"The IT worker shortage is very acute here," says Patrick Valentine, director of corporate and government training at AU. "The solution at AU is to fill entry-level IT slots with non-IT majors."

"The program opens up to me all those liberal arts people who we need to be a little more technical than they are," says Gary Smith, technology director at DTI Associates, Inc In Adineton, Va. DTI is a govemment contractor that is searching for social science

eraduates with better-thanaverage technical skills to work here to the IIC dans ments of Labor and Edwardson



The Tumbey Program will able Smith to hire for social science skills and provide the technical skills later, he says.

Turnkey identifies promising seniors through faculty rect mendations and invites the idents to an orientation se sion, where they hear about specific job opportunities

They also hear from AU alum ni in technical jobs who describe the transition from lib eral arts to technology. "If you've been studying history for four years and you decide to become a Cobol program mer, believe me, there's an ad justment." Valentine says.

But the opportunities make the adjustment easier. For examole, one of the first partner companies will start to Cobol programmers at \$40,000 per year and "give them a vision of where they can go," Valer tine says. "They say if you hayen't moved up in a year

you're at the wrong company."

— Kathleen Melymuka

Review Center

Database management

One just ain't enough

Corporate users wrestle with a growing stock of databases

By Craig Stedman

f you're searching for a database that can handle all your company's distributed processing, some of your peers have a message for you. That salver bullet can be hard to find.

Overlapping demands for high-octane performance and no-hassie development and administration, along with the rise of packaged applications and data warehousing, are pushing companies to invest in multiple databases, according to recent interviews with no technology and business executives; (Profile of database usage at some of those companies begin on the next sace.)

That means information systems departments have to learn how to take care of databases from two or more vendors. And it can complicate the task of keeping applications in sync across the corporate

For example. Dunlop Tire Co. in Amberst, N.Y., has standardized its central processing on Unix servers that run Oracle Corp. databases. But autonomous developers in departments are busy writing applications based on Microsoft Corp.'s Access desktop database and Windows NY. The big lure: ease of use.

"The developers say Access and Microsoft's tools are so easy to learn and cheap that they don't want to use Oracle," One just ain't enough, page 68



One just

CONTINUED FROM PAGE AT

says Hugh Allan, manager of information technology. "But before you know it, you have 20 or 30 of those applications, and it can be hard to manage them all."

The state of Utah's finance divisious in

The state of Utah's finance division in Salt Lake City also is moving data analysis to a specialized decision-support database to chop query response times.

Even a smaller. \$50 million company such as Cascade Designs, Inc. can't count on getting by with a single database. Cascade, a Seattle-based maker of camp-

ing and hiking products, wants to standardize on Microsoff's SQL Server database because of its management simplicity and ties to other Microsoft

products.

But there's a catch: A
key production planning
application that Cascade is
buying currently works
only with Unix-based
Oracle databases.

For large and small companies alike, packaged applications increasingly are influencing — or even ditating — database choices. Comparisons of database

Comparisons of database features are taking a back seat to considerations of which product has the closest ties to a chosen application.

At Princess Cruises in Los Angeles. Attabases were a distant second in the cruise line's thinking, according to Caro.

Sears, manager of financial systems. "We wanted a Jdatabase] company that well-known and would be around. That was probably the extent to which we cared whether it was Oracle or something else." Despite its use of a decision-support database for data warehousing, Utah's finance division has managed to keep all monomanifaram processing in Sphase, Inc.'s

database family so far. But an upcoming purchase of packaged time and attendance software may force the agency's IS staff to make room for Oracle. "From a maintenance standpoint, we al-

ready have Sybase training and expertise." says Brent Sanderson, IT manager at the finance division. "But the database decision could go either way: [Users] find the application first, and that becomes the driver for what we're doing."

Here are some snapshots of the database technologies in use and the challenges found at some typical user organi-



Vice president of information management of information between the president of information between the planned Adaptive

management at Planned: Adaptive Server Enterprise (Sybese), Oracle7 (Oracle), Teradata (NCR Corp.), SQL Server (Microsoft)

Anthem, Inc.

Indianapolis-based

William McKnight

medical insurer

A DATABASE GRAND SLAM Anthem made Sybase's Adaptive Server En-

Anneem mase synams is Auspires Server Enterprise software its standard Units database in December when it was looking for a new managed-care application. It didn't have any big technical justification for picking Sybase. "We felt a lot of glatabases! could do the poh." McKniebet easy.

But the decision was made easy by the fact that the application Anthem chose didn't support any other databases. The only alternative was to not use that package, and we didn't want to do that. McKinghi says. The rise of packaged software takes the database planning emphasis off technical features and reducets

to application ties and wender relationships, he adds. Despite its commitment to Syluse. Anthem is sticking with Oracle on an implementation of People-Sol. Inc.'s financial applications to avoid delaying upcoming rollouts to more business units. Pesture comparisons of the

two databases "yield many similarities." McKnight says. Technology still matters on the analysis side. though. Anthem keeps three years' worth of claims records in its data warehouse, and the Blue Cross/Blue Shield insurer decided NCR's Teradata database running on a 128processor parallel server was just what the

doctor ordered to keep queries from choking. Data mining applications planned for next year will test Teradata's limits more streamously. McKinghi says. And tending a parallel database into for the fainthearned, he adds. There are fewer database utilities available, and the parallel architecture. "In like having."

different computers to manage." The complexity of NCR's database is pushing Anthem toward SQL Server for upcoming departmental data marts that have to be easy to work with and administer. Teradata "sant schinected for that." McKinght says.

Owens & Minor, Inc.
Gen Allen, Va. distributor of medical and surgical supplies

Den Stoller Director of decision support Detabases in use or planned: Oracle7,

OracleS (Oracle)

REEPING AN EVE ON PERFORMANCE Owens & Minor is trying to double-dip by building a data warehouse with the same Oracle database technology used in its transaction processing applications. A big reason: The \$3 billion company didn't have to pay any more money to Oracle because it had "only but the tip of the icrberg" on using up the database licenses bought in the original deal, Stoller saws.

Stoller says.

The Oracle software has been solidly reliable since the data warehouse went into use last year. Stoller says. Oracle also provides good management and monitoring tools and gets top porting precity from makers of query and analysis products because of its market

Court, he adds:

But the biggest challenge Stoller faces is incepting query performance from taking a dive when more users are added, and he says Oracley has been running into problems with just 15 concurrent users and 50% bytes of data. That could be a big problem because Owens & Monro thin year plants to open up the data warehouse to direct Internet access by its customers and uppliers.

customers and suppliers.
The conspary is supgrading to Oracleb, which showed a 30% improvement in query intense on benchmark test: But Soller says he is staying in touch with Red Brick Systems, Inc., which makes a specialized decision-support database; in case Oracleb turns out to a Band-Aid file. We have to see how far we can go with Oracle, but we're still keeping our ordisons oven." he saw.



Don Steller, director of decision support at

LGEE Energy Corp. Louisville, Ky.-based utility

Director of accounting and reporting

Databases in use or planned: Oracle7,

Express (both Oracle)

BUSINESS NEEDS COME FIRST LG&E's decision to go with Oracle's packaged

financial applications locked it in to using an Oracle database. But the database wantpurely an afferthought, Spuriock says. Database performance and proven support for Units and Windows NT were important criteria for the utility.

Just as important, though, were technical support capabilities and financial strength the latter an issue raised by the losses that have plagued other database vendors such as Sybase and Informis Corp.

"Sometimes the technical people can get dazzled by features and functionality." Spurlock says. "But as a businessman, you have to look at all the other things about who you're getting together with And business is the

One just ain't enough, page 70

PC EXPO in New York.



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One just ain't enough

CONTINUED FROM PAGE 68

only reason you're buying the technology." Oracle has been fast on the draw with its technical supfacturing applications max out at a port, Spurlock says. On the other hand, LG&E is having to devote two database administrators to manage and apply patches to the Oracle software. "That's more effort than I

expected initially," he says Oracle? should have enough comph to run the financial applications, which are due for use

this summer. Spurlock says. But financial reporting and budget consolidation are being separated onto Oracle's multidimensional Express database. "We don't want to run analysis calculations against the transaction system," he says.

Cascade Designs, Inc. Seattle maker of camping and hiking products

John Burroughs President

ses in use or pla SQL Server (Microsoft), Oracle? (Oracle)

REEP IT SIMPLE

Cascade has only a four-person IS department, so management simplicity was a top priority when it went shopping for a database to run Windows NT-based packaged applications that are scheduled for a fall rollout.

We just can't afford to have somebody managing this stuff full time," Burroughs says. "Oracle is fighting like crazy with Microsoft (on Windown NTI, but SQL Server seems to

he easier to work with And the long-promised SQL Server 7.0 is supposed to add more self-maintenance features, such as dynamic data base reorganization, plus faster performance and much better scaling when it finally ships late this year. Those ad-

ditional capabilities would be gravy for a Microsoft-oriented company such as Cascade "It just looks to us-like Microsoff's products work better together," Burroughs says. "Microsoft is like IBM in its heyday: They aren't innovators, but eventually they just

grind [the competition] down." The only fly in the ointment is that the production planning and monitoring software Cascade bought doesn't support Windows NT or SQL Server. That application initially will run on its own Unix/Oracle server. "We would eventually like to have everything in the same database."

relatively low 30 transactions per second, and reliability and stability were the big reasons for buying from Oracle "If IT is going to feel the heat for anything, st's when the system goes down," Allan says. "That's always been No. 1 in my mind. Allan has no quibbles with

Its Unix-based finance and manu-

nager of IT at **Dunlop Tire**

Oracley's rehability. But now Dun lop plans a new system that will collect data from each tire building machine in its factories, potentially reaching 500 transactions per second. That may push the company toward Oracle8 in search of more power, Allan says. Dunlop faces a different dilemma at the departmental

level, where developers beyond the reach of IS write appli cations that use Microsoft's Access desktop database. Oracle needs to make its databases easier to work with to bring those users into the fold. Allan says "I'd love to be able to say that Oracle is our database of

choice across the enterprise, but that can't happen today, he says. "We can't get the users off of Access.

Visa International, Inc. San Maten, Calif -based consortium

of credit-card companies John Valenta

Senior vice president of the Information Applications Division

Databases in use or planned: Dynamic Server plus optional parallel and object extensions (Informix)

PLAYING ALL THE INFORMIX ANGLES Visa plans to use the full breadth of Informst's database line to run the applications that support its member banks and credit-card companies. For example, it relies on Informix's parallel database technology to blast through buge volumes of customer purchases in search of trends,

Valente says His staff is also starting to test Informix's muchpublicized object/relational database technology for possible use in future applications involving video, audio or other multimedia data: "I think that's going to start off as

something nice to have, then work into a much more critical thing," Valente says. "But it's still experimental for us." Every three to four months, Visa sends a team to Informix's labs to hash out technical issues with the key database developers and architects there. The so-called 'factory days" are meant to get the two companies working together on fixes. Valente says. For example, they are now trying to figure out a workable way to replicate data to Visa's regional offices around the globe. II

Stedman is Computerworld's senior editor, application

Burroughs says. **Duniop Tire Co.** Amherst, N.Y., tire make

IT manager

ses in use or ol Oracle8 (Oracle)

RELIABILITY VS. SPE AND EASE OF USE

Dunlop could be a prototypical Oracle shop:



Database market reaches plateau

tability sort of snuck up on the database market For more than a decade. relational database vendors have been loading their products with many functionality and performance boosts. Struggling through it products where little need exists. all were database administrators,

forced to climb a learning curve with each new release Wall now it's time for database administrators to take a break from body needed it, and mainstream de-

learning and to focus on producing. That's the goal, isn't it? Get to a point where you can concentrate on producing applications instead of Boston learning new software - we are there now." says Rich Finkelstein. president of Performance Comput-

ing. Inc. in Chicago Finkelstein is one of several inguts of the leading relational data dustry analysts and consultants who say they expect the database man arement system market to stabilize a bit for the next few years, even if it means user organizations have to split their DBMS strategy across two architectures.

The days of vendors making money by forcing customers to upgrade every couple of years are over. Databases are adequate for the tasks at hand and that's why wonders have been getting burned trying to deliver

*Universal Server technology that stuff was a bust. Informix trying to fold in Illustra's object technology - that was a complete fiasco. Novelopers couldn't figure out what to do with it," says Brian Murphy, an analyst at The Yankee Group in

Finkelstein says administrators can still expect enhancements such as new security and monitoring tools. But the transaction processing bases won't change much, he says. Vlad Kroutik, a director of solutions labs at Cambridge Technology Partners in Cambridge, Mass. agrees. "We're in a time where the leriationall vendor's products are so

features will be coming in their [development) tools," he says. For example, the emphasis for DBMS vendors is on improving Java support, as Oracle Corp. did with its AppBuilder for Java 1.0 release last month. And Informix Software, Inc., Sybase, Inc. and IBM aren't far behind: All plan to add their own lava

virtual machine and support for Enterprise JavaBeans by the end of the year, Kroutik says. The growth of the World Wide Web is one reason for the dual-DBMS strategy (see story, page 67). There's a chasm between relation al databases and Web servers, and no good way to close the gap is apparent, analysts say. The Internet, with

its varied multimedia data types. raised some interesting opportunities for object-oriented database vendors such as Object Design, Inc. and Computer Associates International. Inc. with its laumine (see

But the relational vendors, espe- Burden is a Computerworld features stable, we expect most of the new cially IBM. Informix and Oracle.

haven't given up on that space. according to Steve McClure, director of Internet tools at International Data Corp. in Framingham, Mass. *Relational vendors have been slower than the object vendors in accommodating new data types, but they will catch up eventually," be says. There's just no telling how long

"eventually" will take For the immediate future, trying to get relational databases and the Internet to work together isn't worth the effort, according to Finkelstein "It's a fundamental barrier - SQL and the relational model of storing data in Nan-dimensional tables is just inappropriate for the kind of work

propie want to do on the Web." So the way around SQL's limita tions is to use multiple databases, one for transaction processing, an-

other to feed Web initiatives. The chart below shows what's new with some key DBMS players, O

COMPANY	ORACLE	SYBASE	INFORMIX SOFTWARE		MICROSOFT	COMPUTER ASSOCIATES
LOCATION	Redwood Shores, Calif.	Emeryulle, Calif.	Menlo Park, Calif.	Armonk, N.Y	Redmond, Wash.	Islandia, N.Y
WEB SITE	www.orpcle.com	www.zphase.com	www.informix.com	www.ibm.com	ими тогохоўском	ananic COLCONS
ENTERPRISE PRODUCT	Gracieli .	Adaptive Server Enterprise 11.5	Informix Dynamic Server 3-3	DBo Universal Database 5.0	SQL Server 65	ingres II
NEWS/POSITIONING	Oracle, with a strong presence in the Unix market, is pushing hard to expand the Windows NT market share.	Sybase claimed to break the Syo per transaction barner under the TPC-C benchmark when run- ning Adaptive Server on a Digital Alpha system.	Informic announced Dynamic Server 2.3 claiming online transaction processing (DOEP) performance gams of up to 50% at user sizes and improvements in data ment applications through Advanced Decision Support Option.	IBM promotes DRz, formerly a mainframe, specific product line, for both decision support and OUIP applications across serious server platforms, including massively parallel processors.	Microsoft promotes SQL Server 6.5 as the leading DBMS for Windows NT. The second bets of SQL Server 7.0 is in the field now. Our later this year, it was designed to offer scalability and data wave- housing improvements, over Version 6.5.	introduced in late April, Ingres II features inels between CA's Openfload development emmon- ment and C, C++ and Microsoft Visual Basic. It also has embanced repli- cation, rese-level locking and Web connectivity
GENERAL ARALYST COMMENTS	Oracle has an edge over the competition in data warehousing and decision support. — Brian Marghly, The Yorker Crosp "Owent, what we hear from customers is that Oracle has a very strong position at the upper and of the marker." — Wayne Kernechen, Alexeder Crosp	"Splase is now coming out with good benchmark numbers, but the perception of poor scale-billy largers" — Mityre Ermachen	Informit shares a Insde- ship position with IBM and Oracle in data wer- housing, data marts and decision support. — Rich Frieldstook, Performance Computing	1984 is among the lead- ers in data warehouse in data warehouse inchnology— Rick Finishteen. 1984 leads in OCEP— — Brite Marghty and Rick Finishteen. 1984 has a Sight edge water water competition in multimedia support. — Wayer Kereschan	"SQL Server has been siding the rise of the NT market. Release y o should address purformance and replication risums." — Woyne Kirmochin	"Much of CK's gateway technology is predicated on the presence of Ingres II as the point of Integration, which is a very good strategy. Ingres II's excitent manageability and religiously low cost to deploy make it way solidate for the task." Here Adrison, Gga Information Crosp

USER'S VIEW

CA's Jasmine object database takes root NAME Mallor

relatively easy to work with

awkwani

object-oriented design, ease of use

unfamiliar with that type of pro-

gramming may find the transition

Steiner was unfamiliar with

had more of a challenge learning

Users say lasmine still has kinks.

systems engineer at EDS, says he

wants easier backup utilities and

the ability to do more administra-

tive tasks via scheduling or in

Steiner sous he would like las

mune to provide better document

tion, letting him see what actions

and messages happened on an ob-

locate problems quickly, but it also

would let someone eine do main

The ability to reuse data and las-

hatches to avoid proetition

tenance on his database

PRODUCT STRENGTHS

mine's nicest attraction

omputer Associates International, Inc. took a camble with Jasmine. CA played in the general database market for years but broke with its competi tors, opting to develop an objectoriented database management system rather than try to blend ob ject technology into its traditional relational DBMS products

DID CA SUCCEED! USERS SAY YES

Customers say they like Jasmine's ease of use, the possibility for reuse and its flexibility and openness. But they also say Jasmine is immature and that they want better administration tools and more speed. Computerworld interviewed five early users of asmme. which shipped in December to get their opinions on the product's

strengths and weaknesses From what industry analysts say many more users are coing to be interested in what Jasmine and other object databases have to offer Giga Information Group in Cambridge, Mass., predicts that the object database market will grow 50% this year. Giga analyst Mery Adrian says he expects CA to be one of the leading vendors in the market this year alone with Versant Object Technology Corp. and Object Design, Inc.

Each of the companies purchased Jasmine for use with a spe-

cific application American Ho tel Restister Co. uses lasmine

be incorporated in a product Trident plans to release this summer.

agers can share mar keting data and keep account revenues meeting minutes and staffing information on the same site. All of

Each user we spoke with brings a

as a central repository for catalog images, a project that's still being developed. The company currently creates a paper catalog by relying on several different sources, says Marianne Moss, director of systems development at the Northbrook, fil., company

Incredible Card Corp. in Syos set, N.Y., produces a smart card called KidzKard to store children's medical information, fingerprints and abote for reference in case of emergency. The data is maintained in a central fasmine database, and the system is deployed to area hosoitals, says Charles Fishman, chief technical officer.

The Saskatchewan Department of Justice created an accounting based budget forecast system to track expenditures for the Systems Services branch. The agency want ed to search and track its invoices That involved imaging those bills, so (asmine was a logical choice, explains Brian Steiner, technology consultant to the department. The

system is now in full production Trident Systems Corp. in Fairfax, Va., which has been working with Jasmine since September and with several other object databases for seven years, is building a systems engineering information prository for lazer, complex computer systems engineering designs. The lasmine database will

mine's flexibility are big pluses. Flortennic Data Sections Cots according to users. When doing built an application for its account and director-level managers object design, a developer may go through several sterations, twists in Ohso that has been in and turns, Moss says. She has production since Nofound lasmine capable of hansember. The mandling that type of beating, and she says it creates a good skeletal base

for future us Incredible Card developed its second database for LifeKard, a smart card for adults, by replicat ing its KidzKard database. Develit is viewed through a opers can simply take classes and reuse them because it's so easy to create class hierarchies and ma-

everyone agreed that Jasmine is Card can use various front ends with the product such as Microsoft For a person who is used to

Visual Basic, C++ and Java Arndt says he also likes is mine's open interface. "With a lot is high " Fishman savs "Those of other products, you have to buy the developer's proprietary interface," he says. EDS was able to use a text editor and a Hypertext object-oriented programming. *1 Markup Language builder to cre-

ate an interface. how object technology works than I did learning Jasmine ODBC or

Jasmine Studio," he says. CA and None of the users would mind if a consultant mentored Steiner Jasmine's speed improved, but the system's current performance isn't Once he got into the environment. he found that he had to write very a problem for anyone we talked to little code, which he says is las-Before receiving Version 1.11 of lasmine. Steiner's biggest complaint was speed. It would have been hard to put the database into production at that speed, he says David Arndt, an engineering

Version 1.11 is "an order of mag nitude faster," but he says he would like to see Jasmine get even Trident's benchmarking found that lasmine wasn't the fastest object-oriented database for every query type but that its performance was good in each area test ed, says Dave Britton, technical

ment at Yndent

Users at all five companies rave about CA's support. They also take comfort in the size of CA's organization. They have been very supportive any time we have a problem." Fishman says.

director of research and develop-

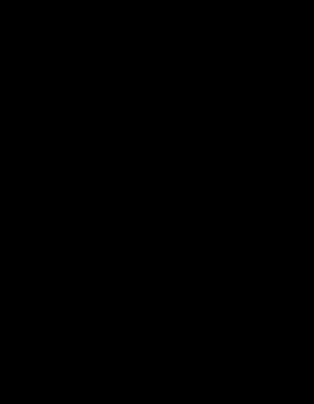
Adrian says CA uses its resources to its advantage. "A company can either rely on its size or leverage its size. CA is leveraging its clout and resources," he says. The fact that CA is a multibillion dollar company makes it a safe bet for the future, Arndt says.

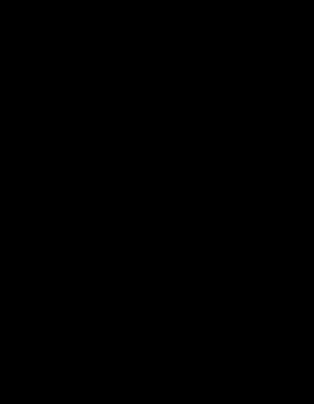
Trident chose CA because the vendor is able to support Trident's need to add features and is responsive, says Trident President Nick Karangelen D

Malloy is Computerworld's associ-

Jasmine EASE OF USE different skill set to the table, but

nipulate them. Fishman says. Users also like Jasmine's open-ness. Fushman says Incredible at ofter Review Conter-





In Depth

With a new generation of breakthroughs on tap, Xerox's legendary lab aims to be an IS pioneer once again

A walk Parc

BY GARY H. ANTHES

After weeks of cold El Niño storms spring has come to Coyote Hill. Bee throng to poppies and jasmine awakened by the rain, while computer scientists an engineers eat lunch in the warm California

An aging sign reads simply, "Xerox Pale Aito Repearch Cester," The boxy building behind the sign could be any one of the hundreds that exist in Silicon Valley, but this one is special. It's the birthplace of distributed and

was right there if years ago," say Ramsus Rao, chief technology officer at Richard Southern Calibras Seen Perc Greening. What commercializes Seen Perc Greenings. What from the analysis," Indeed, it would be hard to over-ceitause the importance of the Hings Green-elimant the Child Will be an analysis of the Importance of Importance of the Importance of Im

oct, laser printing.

A walk in the Parc

CONTINUED FROM PAGE 73

But in one of the buggest blunders in corporate history. Xerox Corp. gave away its user interface technology to Apple Computer. Inc. Xerox also let other killer technolomes slip away to other companies in the Valley, Meanwhile, its attempts to market a computer flopped.

Now, after a long, quiet period, the legendary Xeros Paec is again in a position to shape the future of computing, some observers say *During the 1080s, it was conventional to say that Parc was no longer relevant, but I believe that is false today," says Eric Schmidt, chairman and CEO of Novell. Inc. "The new generation of researchers is doing innovative work on the foundation of the one inal founders of Parc."

Schmidt cites Xerox Parc's "hyperbolic tree" - a quasi-threedimensional browsing and display technology that offers comprehensive views of complex data - as an example of what might emerge as the next-programma GUI (see story below! "What's the No. 1 problem on the 'net?" Schmidt asks. "You can't find things. These guys are

ahead of everybody else Despite having invented much of it. Xerox now disparages today's GUIs as "the WIMP paradigms" -Windows, Icons. Menus. Point and click: Those GUIs wimp out against huse complex data hierarchies such as the World Wide Web, Xerox Parc

The hyperbolic tree is among the first in a planned family of patented components that Xerox Parc calls wide widgets." Wide widgets supelement the traditional point-and click with a broader nee-and-on anproach in which users can take stock of complex stores of information and easily focus on areas of interest before clicking on an item.

The recent Xerox spin-off InXight licenses the widgets to application developers - such as Microsoft Corp., Oracle Corp., and the major Internet search engine companies - to use in their user interfaces.

Wide widgets borrow from techmoues in science and modeling We saw that we could build office software, not just scientific visual tration things that are big and fast and hard to understand like clouds and proteins," Rao says. "Docuts on a network are also big and fast and hard to understand." Xerox Parc still sounds the

ra of usability and simpl as it did as years ago when it wought together the WIMP compo

is that technology has finally go powerful enough; maybe it's high time it gets the hell out of our way says John Seely Brown, director of Xerox Parc and chief scownist at Xerox. You want to be able to reach right through the technology, as if it's not there, right to the work you second to do

According to Brown, 90% of the burnan brain is devoted to process ing sensory information and 10% to cognitive or thinking tasks. In comnuters that ratio is reversed - to the determent of over he core Tools such as the hyperbolic browser leverage the senses, he says At Xerox Parc, inventing tools to

aid usability isn't just an exercise in computer science. Getting technology to disappear "requires a new set of eveglasses," Brown says, "We've learned from business process reengineering that descriptions of how work gets done are almost al-

ways dead wrong." For that reason, Xerox Parc employs four anthropologists whose sob as to study - often in mindnumbing detail - how workers work. In a landmark study for San Jose International Airport in Califorma several years ago, Xerox Parc and Steelcase Corp. interviewed and videotaped ground operations work ers for two years. That scrutiny led to the discovery that a critical online scheduling sestres couldn't be viewed in isolation. To improve the system required an understanding of feeds from telephones, radio and

namer documents and how those media were used. "The Parc people — and partico larly project leader (acy Suchman - did the most wonderful job of

and got more insight into them than anyone in the world at that point," says Larry Keeley, president of Doblin Group, a Chicago-based design consultancy that worked or the airport project. "Xerox products are materially more effective and easy to understand because of the way they do operability analysis and the way they understand the social and cultural affects of new technol one " Keeley says Suchman, an anthropologist who

heads Xerox Parc's Work Practice & Technology area, urges information technology researchers to bring a combination of "deep understand ing and imagination" to their studies of work practices. "People in research really underestimate the amount of innovation going on in the workplace," Suchman says. "The world is much more interesting than we ever imagined."

NEW METHODS

system. Suchman studied how a lawyer located documents in his file cabinet. "It's a perfectly banal active ty, and you might think you can rely on your own experience," she says But she found that the lawver-often located documents not by reading to tles but by noting physical features. The resulting system uses electronic folders that display thumbnail in ages of documents' first pages that can't be send but that look like their physical counterparts

For a law firm document-retrieval

Xerox calls itself "the document company" but it defines "document" much more broadly than its core businesses in copying and printing would suggest. The document is "a carrier of information around which knowledge gets crest ed, captured, consolidated and communicated," Brown says. Any technology that might support those ions is fair game for Xeros

Parc's \$60 million research budget "We do everything from atoms to culture here, from inventing funda mentally new types of display technology to engaging anthropologists to look at where value really gets created in the office," Brown says. Asked which of his many projects might have an especially large im pact on the workplace, Brown cites Xerox Parc's work in "smart mat-

ter." where computer science and

material science converge In one smart-matter project, mi rescopic sensors and actuators are distributed along a metal beam. As the beam is stressed, computers feed instructions to counteract the stress forces to the actuators. Such an arrangement might keep a buildine intact during an earthquake Xerox will never again give away its technology, Brown yows. "In the 1970s, creating patents was an afterthought, and defending patents

was an after afterthought," he says.

"But now we take intellectual prop-

erty deadly seriously. Rao acknowledges a certain ambrealence about that strict posture. "It's a little bit of a conundrum. It the genie had been bottled up and held tight, there wouldn't be all that stuff now. So from that perspective. it's been a glamorous success," he says. But if companies never reaped financial rewards from their research, they would cease to fund it,

Asked how to reconcile the enals of wide dissemination of technology with protection of shareholder inter ests. Rao says. "We have to provide business value, and bring pricing down. We have to have five carrots in the hand and the patent stick in the back pocket."D

be adde

Anthes is Computerworld's editor at large. His Internet address is gary_anther@cu.com

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Schoolkids see computer professionals as 'geeks' and 'nerds' and a real turnoff as career models. But a new effort hopes to show how cool IT can be

IT STAFFERS. Get out your min rors. What do you see! How about a skinny white man sporting thick glasses, bow tie, too-short pants, receding hairline and, yes, the stereotypical pocket protector? Don't like the image? Sorry, but that's how the possible future generation of information technology work-PTS SPPS 1000

And maybe they won't be IT work ers as a result

Recently, sixth- and ninth-graders from eight public schools were asked to draw a picture of a computer professional. The assignment was part of an IT worker image study for this winter's IT workforce convocation in Berkeley, Calif.

From Maine to California, the kids' man of what an IT weeker looks like

was startlingly similar. "It came as a surprise that there's still such a strong greky image of IT professionals," says Jan Grecian, deputy chief information officer for the state of Missouri, who worked on the project. These kids have a pic ture in their mind of the nutty pro-

It isn't good news for an industry already struggling to find enough talent. Although IT staffing experts argue about precisely how many thousands of IT jobs are going unfilled in this country, they agree that there's a critical shortage of skilled workers

coming through the pipeline. "Our industry is going to have to

or custome interestor in Exis. fax, Va., and member of the IT Image Task Force. "We're just not focused on this as a national problem. There are too many other forces pulling at kids in the school and university system. How do you affect that motivational structure to encourage young people to form images of what a good career this is?"

EVERY PICTURE TELLS A STORY Negative images of computer profesrionals abound, and the media is seen as a prime culput.

*Look at Honey, I Shrunk the Kids or even 'Dilbert.' " Grecian says. These people are not doing things work to attract more qualified peo-ple, says Ted Legasey, chief operating in movies, the IT person as a sidektch or a bad guy. And kids say, 'Can I officer at SRA International, Inc., a

ne myself in that role? " So what kind of media roles are we talking here? "We need LA Engineer ing," says Harris Miller, president of the Information Technology Association of America (ITAA) in Arlington.

Va. The year that L.A. Law came out law school applications were up 24% We need to project the idea that it's good to be a programmer - you get to hang out with interesting peop and always be on the cutting edge of new technology."

Legasey says computers may be losing their fascination for many schoolchildren. 'They're engaged with computers from grade school on, but it's an everyday occurrence to them. They just see it as something they do all day long, not as a profes

sion," he says.

Moreover, in many schools it's uncool to be into computers. James Moorby, 15, attends Union 32 Junsor/ Senior High School in East Montpe her. Vt., and hopes to work as an IT

Moorby says, "I don't really consider myself a geek, but other people do. They put all my friends in the seek category."

GEEK SHOULDN'T BE BAD Moorby adds that be isn't particularly bothered by this image hurdle, but that his peers need a little guidance. "Geek has grown to mean you're smart and know a lot, it shouldn't be considered bad," he says, "For some people, it's not cool to be called a geck, but they just have to figure it out for themselves. If we give everybody a chance to try computers and enough encouragement to show them

they can do it, that's a start." It can help kids rid themselves of the misguided image of an IT professional as someone stuck in a cubicle

working on his computer tan "Kids (typecast) the kind of people who use computers," says Scott Perry, vice president of advanced platform services at AT&T Corp. in Parsippany, N.J.

"There's an ESPN commercial with a kid working on a computer talking to a ballplayer," Perry says. "And the skinny, fast-talking kid is so dramatcally different [from] the athlete. You wouldn't walk away from that commercial thinking. That kid is who I want to become.

Perry says an image change is vital to keeping a stream of young blood



flowing into IT. "When we go into high schools, the pipeline is just not there for good math and science skills - or even interest in acquiring them We're not out to create a Hollywood image, but a good impression of IT is so important for building a strong

economy for the future," he says RATE CRISIS The skills hiring problem has reached a critical stage for many employers Things have changed over the pas

year or two," Miller says. "I hear CEOs say, 'Last year we doubled our budget for help-wanted ads, tripled our budget for job fairs, quadrupled our budget for college recruiting. Maybe it's time to switch our strategy a little "

Miller says the industry has to change its tactics to "putting more resources into growing resources Companies need to increase the entire labor pool, not just attract people to their own shop. They're realizing that we have to develop programs that [for instance] will attract to kids to the industry; maybe two will come to them, and eight will go

somewhere else. But having a battle royal over a static pie. they're going to end up suffering

GET THEM WHILE THEY'RE YOUNG The key to expanding the labor pool is to engage kids early and show them that IT is an interesting, excit-

ing career "Start as young as you can get," says IT Image Task Force member Gary J. Beach, publisher of CIO magazine (a sister publication of Computerworld) and founder of Tech Corps. "We've been promoting the idea to the White House that when a kid is born, get a Social Security num. ber for them and an E-mail address Bell Atlantic has a school in New Jersey wired to the gills, and at that school, it's cooler to have an E-mail

address than the latest pair of Nikes." If the IT industry hopes to some day turn young people into IT employees, it must nurture them early on, says Ron Suskind, author of A Hope in the Useen. The book is based on a series of Pulitzer Prize-winning articles about an African-American kid raised m a tough inner-city school in Washington who went on to exce as a math and science major at Brown University in Providence, R.I.

You should be getting them in such and seventh grade. Junior high is a kind of crossover time when peer is sues really take over."

Steps that would help change the image of IT workers for school kids include local companies sponsorina IT job fairs and mentoring programs "Send vivid characters, well-round ed individuals who go in and say Look what we're doing with comput ers. We can create music, use graph-

ics to make a video," Suskind says. ATTITUDE ADJUSTERS

So what's to come from all ther talk about the IT worker's negative image? Companies, industry groups, government and academia are racking their collective brains to come un with ways to burnish

the image of IT. "We're starting a speakers bureau of National Medal of Technology Winners to send out into schools," says Cherri Mendonsa, director of strategic planning for the U.S. Depart ment of Commerce, Technology Administration. "We want to personify technology for these kids, to

make it more real Our speakers have done everything from invent an electric guitar to a helicopter. They're charismatic. Children are trained to look up to sports stars; we show them the Olympic medalists for tech nology "

Miller reports the ITAA has joined forces with Microsoft Corp. to distribute a videotape aimed at young peo ple. It was developed specifically to help eliminate some of the stereotypes. There's also talk about a national ad and marketing program. such as the "Got Milk?" campaign, to increase IT brand awareness

A REAL TAN

AT&T has also produced videotapes as well as the award-winning ad spot that celebrate the cool of technology You can see someone sitting on the beach with a wireless device communicating about business - getting a real tan instead of a computer tan. Perry says. "We're describing a future that's very exciting, that's powered by good analytical and software skills." National reach is important, but Perry also calls for a more focused approach: "Company X and College Y and City Z need to look at the prob-

lem at a local level, to create a tighter

connection between local employers

and universities and schools." Many communities have been busy

doine just that Every June, app simately 100 middle schools in Massachusetts are treated to a program designed to "explain how networks are built, so kids can see it's cool," says Nina Saberi. executive board member for the Massachusetts Telecom Council. "We created a videotape that explains that when you pick up a phone or book up computers, this is the industry that makes at happen. We help them see that the future for people who pursue computer education will be bright. One kid said, 'Forget about me. How do I get my dad in this

business? When talented young people do get beyond the stereotypes, they are full

of enthusiasm for an IT carrer. Jennifer Grounds, 23, a senior at the University of Nebraska in Omaha is majoring in computer sciences and plans to get into the business this Summer

"Some people tell me that IT's too hard, especially for women. These are definitely more men in my math classes," she says. "But I'm seeing more women in computer classes. Places where I've worked with women. I didn't see that they've been minated by men."

DIFFERENT POINTS OF VIEW If the industry is serious about at tracting more talent, it has to look at

the image problem from many van tage points There is not a one-size-fits-all an roach," Grecian says. "Whether it's attracting women or minorities or older or younger people, you have to target each group individually

'It has to be a multifaceted appreach to change our image." Mendones says. "It has to be a constantly evolving campaign," Saberi adds, "These

stereotypes are not going to go away overnight you have to develop pro grams and run them time after time." To dropel the need-vs.-cool dynamic. you have to draw kids in by using

what interests them. Suskind says. They'll see they can check out the NBA site or listen to the latest hip hop single on the Internet, It's not just playing around. Let them know that these machines can be fire " be says. "If you want to get a generation interested, that's how to do it. Roll up your sleeves and think like a to year-old, and you'll have an army of 14 year-olds who say. "Hey, that's what I want to do." "III

Menagh is a freelance urace in Maple

IT THROUGH A CHILD'S EYES









Tom Bozilaski has been ap ed senior vice president of information systems operation and network services and Alan F. Bignati has been named se-

nior vice president of IS devel opment and architecture services at Fingerhut Cos. in Minneapolis. Bozlinski, 50. has been employed by Fingerbut since 1993 in a variety of IS roles. Prior to that, he was managing director of systems at Northwest Airlines, Birmall, 46. most recently was vice president of information technology at American Express Financial Advisors in Minneapolis.

Todd C. Chaffee has been appointed executive vice president of corporate development and Inc. in San Francisco. He will be responsible for the company's advanced technologies. technology research, business development and alliance management. Chaffee joined Visa International in 1994 as senior vice president of advanced payment systems

Kenneth W. Gerhardt has been appointed senior vice president and chief information officer at ConAgra, Inc., an international diversified food company in Omaha Previously. Gerhardt was CIO and senior vice president at AmeriServe Distribu-

tion. Inc., a food distribution company in Dallas. Peter H. Janak has been named CIO at Delphi Automotive Systems, a division of General Mo-

Delphi Strategy Board and will lead a team of seven informabon officers from Delphi's various divisions. Prior to joining Delphi, Janak was vice president and CIO at TRW, Inc.

John R. Keast, 44. has been appointed vice president and CIO at PG&E Corp., parent com namy of Pacific Gas & Electric ut San Francisco. Previously. Keast was vice president and CIO at

Clans Corp

Richard A. Nanson has been named vice president of information technology, architecture and planning at Columbia Enersy Geoup Service Corp. in Res ton. Va. Manson, who will be based in Pittsburgh, had been rice president of technology at Columbia.

tors Corp. in Trov. Mich. Janak Stephen C. Plut has been apalso serves as a member of the pointed director of information sen Consulting. ______



technology at Mune Safety Appliances Co. (MSA) in Pitts burgh. Plut previously worked as an adviser to the company and has more than 16 years' exerience in IT. Prior to joining MSA. Plut led the IT tran mation services group for De loine & Touche Consulting Group. He has held IT post tions at H. I. Heinz Co., Calgon. Corp., Dollar Bank and AnderStephen A. Steinberg, 53, has been named executive vice pres ident and CIO at Enhanced Financial Services, Inc. in Nev York. He serves on the firm's management committee and reports to CEO Dan Gross Steinberg was previously senio vice president of information systems and technology at Cap-MAC Holdings, Inc. Before that, he was at Citibank for 16 years. D

By Alan R. Earl

ide the Te and Building Your Inde St. Horsey Kay John Wiley of Sons, Inc., New York; 1908; 166 pages,

Sup os (hardower) iers will find the structured "business basics approach of Inside the Technical Consulting Busi-ness to be a welcome change from the typical ow-to-get-started career tomes. The author stresses that his book is not a "get rich" book but a "get profes sional" book. Think of Inside the Technical Contuiting Business as an essential text for snyone seriously con sidering a career move to consulting or already started

in the field. Its introductory chapters help readers examine whether IT consulting is right for them. Later chapters cover everything from marketing to management to working with other con-

sultants. The material is orough and well struc-

Presentation also get high marks. There's a nice balance between text-heavy material and meful well-conceined ns and sideburs Among those are sample

New career titles on IS consulting and management ment outlines, marketine presentations ou lines, innumerable tips and even an appendix with brief

but instructive case studies. If there's anything negative about Inside the Technical Consulting Business, it's that the author's actual experience - and the thrust of much of his advice - is in the realm of traditional engineering rather than specifically in information technology

The New Supervisor: How to Thrive in Your First Year as a Manage By Martin M. Broadwell with Carol Broadwell Dietrick Addison-Wesley, Reading, Mass.; 1998; 294 pages; \$14

ach year sees the arrival of scores of books on the art and science of management. Almost all are foscused on issues that confront managers who have ascended at least a few tiers beyond the bottom rung of anagement — supervision

This book is a happy exception It focuses only on supervisors and only on those who are making the life-changing and often difficult transition from skilled professional to skilled professional with supervisory responsibilities.

Although it isn't l'Especific, this primer, now in its third edition, offers new IT middle managers the essentials: delegation, problem-solving, motivation, time management, communications and the performance

Martin Broadwell, involved in management training for many years, has teamed up with his daughter in this book and has put more focus on issues for the times, such as stress management and team building. Organizationally, one of the book's most outstand features is its end-of-chapter-exercises - adaptable for classroom or individual use And though not by any means recreational reading. The New Supervisor provides exactly the trove of infor-

mation likely to be of interest to the new manager. How to be a Suco

essivi Computer Consultant

McGraw-Hill, New York; 1998; 348 pages; \$21.95 (paperlan Simon says Ho to be a Successful Computer Consultani

was the outgrowth of research and thinking be began while putting together his independent consulting business in the 1980s. This latest edition (the fourth) blends the material

By Alan R. Simon

oriented toward indepen dent consultants with sev eral all-new chapters about how to succeed in corpor. settings, how to thoroughly define the boundaries of a

new consulting engagement and how to deal with difficult client situations. This new material clearly applies to all consultants, whether independent or working for a consulting firm. Simon is now employed by a midsize consulting firm

- making his advice especially relevant. Although How to be a Successful Computer Consultant has some weak spots - notably in design and readability - on balance, the book is a cost-effective primer that keeps its sights focused tightly on the core realities of IT consulting. O

Earls is a freelance writer in Franklin, Mass.

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Ah, sunny Florida! It's oot just for retirees number of information systems professionals are head ing south for employment opportunities in the Sunshine State. Cities such as Jacksonville, Tallahassee Orlando. Tampa and others in northern and central time. Keen says. "They from them down) because of Florida are experiencing rising demand for programmers, analysts, database administrators, systems administrators, network administrators, engineers and other information systems talent.

With the allure of sun, sand and surf come numer ous individuals who hope to relocate to Florida and take

REGIONAL SCOPE Northern & Central Florida

iT managers will pay you bigger salaries and sometimes sign-on bonuses to take their job offers. in exchange, they expect you to stay / BY KERRY LEE

advantage of the natural entirements and the IS jobs. But out-of-state talent may be attracted to the region for the wrong reasons. Ray E. Smith, president of Smith & Associates, an IS recruiting firm in Savannah Ga. says local employers are most interested in individuals who have a bit of staying power

'One of the things that employers are really looking for, in addition to the skills, is someone with some cor nection to the area, a reason to be in the area," Smith says. "Employers are looking for stability in employees finet and some employees are looking for stability in companies. They don't want to have a swinging door, they're looking to hire employees that are going to stick

with them for a while." The loyalty factor can be a difficult one to put a price tag on: To get loyalty, you have to pay more. If you're willing to pay more, you help fuel the paper chase around rising salaries. Carol Kren, a recruiting consultant in the information systems division at Dunhill Professional Search in Tampa, says IS managers may quickly find themselves in a "bidding war" to attract

and retain qualified personnel. "If a company's going to basically go into a war, a bidding war to get them, where's the loyalty?" Kren "They're not hiring you because you're exactly

what they want; they're hiring you because there's just a need. The loyalty that employees used to have to the companies, it's just not there anymore. Someone can get a lob and six months later, a recruiter calls them about a better job, and they're cone Dunhil's candidates turn down job offers all the

counteroffers. Either their current company offers them a great salary to stay on board or another company offers them \$0,000 or \$10,000 more. How can meone making \$35,000 expect \$50,000? Well they

do, and they get it," she says. mals who are considering a move to Florida The likelihood of receiving a

should keep in mind that Florida has no state in tax, Kren says. So salaries often are lower than they are in other states

As for the IT talent in demand, 'The implementate of enterprise packages is very hot right now," says Sta cie Collins, national staffing manager for the manufac turing, retail and distribution line of business at KPMG Peat Marwick LLP. "Everything from SAP to Oracle to PropieSoft, Baan and I. D. Edwards — those are the packages we concentrate on. Client/server development rtwork architecture, electronic commerce and, or course, the year 2000 issue is big right now," she says There is always a good market for Cobol program mers and object-oriented programmers. Smith says. Al-

so on the rise; demand for Visual Basic and C++ and a

growing need for PowerBuilder programmers. O Lee is a freelance writer in Austin. Texas

Title	Salary
CIQ/VP of IS	\$94,000
Director of IS	\$65,000
Data processing manager	\$51,000
Senior programmer/analyst	\$41,000
Programmer/analyst	\$36,000
Help desk operator	\$24,000
Computer operator	\$24,000

Sign-on bonuses catching on

Though they are averse to actu ally using the term "sign-on bonus," many local IS recruiters admit that more companies are offering financial incentives to prospective employees to come

"They're getting the moon the stars, the sun, everything They're getting| real-estate fees, closing costs, excellent relocation packages, plus some sign-on bonuses, plus just incredible salaries," says Carol Kren, recruiting consultant in the IS division of Dunhill Professional Search Though they are evaluated cave-by-case, most sign-on bonuses range from \$1,000 to \$5,000 on top of an employee's annual salary, says Ray E. Smith, president of Smith & Associates, a recruiting firm for IS professionals

"That's usually given upo signing, an initial amount up front with maybe a portion of the amount agreed to at certain intervals of employment, after six months, a year or whatever Basically, it's used as an incentive to keep the employee on the job," Smith says.

Kren says many employers give a sign-on bonus ec to one month's salary.

sign-on bonus often depe on the employee's skills and iob title, experts say "Litually when we look at salaries, we bring people in based upon what they bring to the table and where they fit in with our current staff," says Stacie Collins, national staffing manager for the manufactur retail and distribution line of business at KPMG. "One thing that we're very cognizant of is that you don't want to bring someone in with two years of

experience and pay them more than your whole group who has four years of experience." Many companies have to adjust salaries and benefits of

existing staff to compensate for sign-on bonuses of new hires.

THE SKINNY ON SIGN-ON BONUSES AMOUNT OF BONUS: \$1,000 to \$0,000 or one th's salary

WHO CETS THEM: Year on prof NGS ATTACHED: 8 es may be cont

the length of emple d if the on its: tied to healt ing costs, it s, etc Ot

And as long as the IS market continues to house a large demand for qualified professionals and a relatively small supply the practice of offering sign-on bonuses will continue

experts say. "I think we'll continue to see it as lone as the market and technology is such a hot area, so I don't really see it slowing

down." Collins says. "The effect can be very nega tive on the marketplace in terms of people just buying people, so I hope to see it o ing in line as things kind of steady off But if the demand continues to be like it has been the sky may be the limit," Collins says. - Kerry Lee



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said. A single vendor's control Win 98. lawsuits put on hold CONTINUED FROM PAGE 1.

industry observers are betting other products, such as the Inon the government. By waiting so long to negotiate, a defiant Gates has left Microsoft in a weaker bargaining position, experts said. State and federal lawrers are now holding over Myrmonit's head two far-reach-

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MICROSOFT/BOJ CLASH



of how the desktop looks will stunt online competition "if they misuse that power," Dyson said. "I'm happy to see Mi crosoft being out on notice that they shouldn't do this." So far, Gates has stubbornly clune to his claims that Mi

crosoft isn't a monopolist and doesn't abuse its power, that the government shouldn't interfere with how software is delivered

and that the U.S. will be hurt if The government's argument

boils down to a clasm we're putting too much Internet support into our products, [which is! misuraided." Gates said recenth

"Microsoft is one of the few companies that I have ever seen that doesn't seem to want to settie any matter. They seem to be missing the DNA, the settlement gene," said Steven Newborn, the Federal Trade Commission's litigation chief until 1994 and now a lawyer at

Rogers & Wells in Washington. "I think Microsoft's arrogance just continues to get them in trouble," said Allan Ditchfield, information officer at Progres-

sive Insurance Co. in Mayfield Village, Ohio

But Gates is scrambling now. And while negotiations continue. PC makers must wait for Windows 98. Retailers and hardware companies have complained that a delay could cost them millions of dollars. D

customers. The IBM case

dragged on for 13 years and cost

IBM and taxpayers hundreds of

millions of dollars before the

The government 'is three [Microsoft] now instead of Microsoft threatening the rest of the industry. The tables really turned at the brink," said John

Chapman, a former Justice Department lawyer who cross-exammed witnesses during IBM's antitrust trial in the 1970s. Several lawyers and other ob seniors said that to avoid a law suit, which could fie up comnany resources and affect strat

gy for years, Microsoft will likely have to agree to the following: a That contracts with DC mak ers. Internet service providers and online content providers contain no provisions stopping them from similar business with Microsoft competitors. That it will omit conditions from operating system licenses

that require licensees to accret

the FTC to take over the DOI

ugust 1997: DOJ probes Microsoft's purchase of three streaming-video companies and its \$150 million investment in Apple Computer,

thes Internet Explorer 4.0: is part of Windows, not a bun-

browsers (see chart, page 1). But that isn't enough, said Esther Dyson, an industry commentator and chairmenean of EDventure Holdings, Inc. in New York. She said the real

Microsoft has changed some of

problem with Microsoft is a potential one; the possibility that the windor will control Internet content, she said.

Microsoft plans to give prime desktop space in Windows of to links to its own World Wide Web sites, such as the travel reservations site Expedia, she

DOJ woes: IBM has been th ns business practices. In March, it revised contracts with about 40 Internet service providers to let them promote competitors' By Gary H. Anthes

> ANTITRUST SKIRMISHES between Microsoft Corp. and the Department of Justice bring back memories for some users of the battle fought two decades ago between the government and another industry giant, and

tracted IBM antitrust case may

hearten Microsoft's competitors.

but it isn't a pretty picture for

the government, Microsoft or its

works

IBM compiled 66 million fears of similar impact on the software leader. worers on the case. A comparison with the pro

Justice Department acknowledged its case was "without pages of evidence and at one point had more than 200

"It was a huge drain on man asement resources and talent." said management consultant Sam Albert, who was an IBM executive during the antitrust

TIME LINE -

CONTINUED FROM PAGE 24 Netscape's share of browser market slips to less than two June 1997: Three senators ask thirds of Internet users.

October 1997: DOJ seeks \$1 probe, which they deem too slow The FTC declines. million-per-day fine from Microsoft for allegedly violating July 1994 consent decree by force ing computer makers to use

its Internet browser as a condition of selling Windows oc. mber 1997: Microsoft Microsoft says Internet Esplorer

died product

October 1997: Sun Microsystems, Inc. sues Microsoft for allegedly failing to stick to its Java licensing agree-

> December 1997: Microsoft claims that Windows os won't boot if Internet Explorer is removed as the DOJ asks. Federal Judge Thomas Penfield Jackson tells Microsoft to drop the Internet Explorer 4.0 requirement but



isn't convincing. At least nine states meet to consider jointly filing a separate suit

January 1998; M. crosoft agrees to let PC makers remove Internet Explor er from Windows os but asks an appeals court to overrule a ruling that requires the separation of Internet Explorer from Windows 95. Judge declines Mi crosoft request to remove Harvard University law professor

products they will have in two

years mean nothing to us [now]

because we may end up with a

different Microsoft out of the

said Franklim Athias, senior di

rector of new media system

development at Conscast Cable

Other users worry a lawsuit

Eve

Gary Thomson

vice president of

information sys-

tems at Choice

will disrupt Microsoft's focus.

creating a negative ripple effect

Hotels International, Inc.'s data

center in Physicis wants Mi.

crosoft to find a way to settle the

Pricing is another issue. An-

titrust lawyers look hard at prac-

Microsoft's legal and lobby

What we're paying for today

into a lot more, with us paying

for things that were always com

that if Microsoft CEO Bill Gate

doesn't budge on key areas of

the dispute, then the company

David Johns, CIO at Owen

will ultimately be unlit un

Perhant the biopest fear is

plimentary." Athias said

through on their product costs.

at a major energy company

users look at it differently

Corp. in Philadelphia.

into the future.

Customers fear fallout will disrupt IT plans

aren't sure it will make that much difference, at least in terms of their interest in Microsoft products *What can ithe fustice De-

partment| do? They can slap them on the wrist. They can solit them up. What the hell difference does it make?" said Chris Horrocks, chief information officer at Commercial Financial Services, Inc. in Tulsa. Okla., which buys \$4 million worth of products per year from

Microsoft He said a divided Microsoft would still be large, and he would still do business with the

LONG-TERM EFFECT Other users aren't so sure. They said they worry that an antitrust lawsuit, successful or not, will change the company, influence its product plans and constrain its strategy in ways

ere, done that

illegal

observers said

battle. The government action

encouraged IBM competitors to

file their own antitrust suits.

and employees became ultra-

cautious in their efforts to avoid

anything that might be seen as

breakup, IBM stratified itself in

a way that made it harder for

users to integrate its products.

And IBM passed along the cost

of the case's huge administra-

tive burden to customers, some

Fearing a court-ordered

that will hurt or hold up customers (see related story at left) "The end user is not going to get a lot of benefits from a long. protracted legal fight between groups of lawyers," said Roger Walters, CIO at Booz

Alien & Hamilton, Inc. in McLean Va For example, Microsoft's biggest customers have been in volved in early development of

key future Microsoft products, including Windows 98 and Win dows NT ; o, lend one feedback and doone tests And special briefings have en key customers an idea of

ow they will be able to use the case before key upcoming prod products when they ship. ucts, such as SQL Server 7.0. But wrangling with the U.S. get lost in the dust storm of an Department of Justice means "a antitrust case. "I can just see lot of the meetings 'we've altheir focus coming off the bus ready had with Microsoft about ness and onto a hreakup. Thomson said. "I lived through where they will be and what AT&T's breakup.

benefit from the IBM case. In 1969, IBM voluntarily - but clearly under antitrust pressur "unbundled" its pricing of hardware, software and services. Unbundling produced an explosion in the number of independent software suppliers in-

cluding, eventually, Microsoft. *From a customer's point of view, it was terrific because it instilled competition where there hadn't been any," said former IRMer Allan Ditchfield. now chief information officer at ressive Insurance Co. in Mayfield Village, Ohso. "If it weren't for the antitrust thing, we'd still be eating Pl/s for

lunch."[]



Corning, said he would urge top technology executives testify before the Senate Judiciary Comsee: Gates ouizzed about mo nopoly power and restric tive licenses. A friend-of

court brief in the Interne Explorer case is filed by 27

May 1998; Sun sues Mi-

Microsoft to be flexible in talks with the Justice Department to avoid going to trial "Look at the eno

act of past antitrust actions AT&T, IBM," Johns said. Mtcrosoft doesn't "want to get insolved in something like that and we don't want it either." (See related story, page 24. "The one thing Microsoft has been able to offer because of its

size is a lot of standardization said Paul Tinnerello, sensor vice president of information technology at AM Best Co. "If they were broken up into small pieces like AT&T was, there might be more fragmentation of tools and software. which would result in a

lot of people trying to second-guess where the industry is come." Metropolitan Life Insurance Co. is considering Microsoft as an enterprise vendor, but it isn't construced that Microsoft is ur

to the task A solit would make things perse said Rob Dublin director of technical architecture at the New York company, "My God. dealing with two Microsofts! II would take 40 years to get a

ing for competitive reasons, but contract stened There also are fears that if the ing expenses will be 'passed overnment changes the packng of one product (Win 98, for example) the fate of oth said loseph Awr. an IT director er moducts small be assure "If they do this to Windows this \$1,000 NT server, could turn

o8, why wouldn't they do it to Windows NT," said Richard Hebda, a vice president at First National Bank of Chicago. "NT is Microsoft's designated corporate platform. Will Active Directory be in NT s.o. or will that be another product? Will all of that be additional costs for

clude Sun's laws in Windows of

May 1996; DOI and many

states prepare to sue Microsoft

which agrees to delay Windows

of release and continue talks

tend to Windows 98.

me now?," said Athias, echoing others' concerns. D

trol of a commodity or servi in a given mark Appeals court agrees that the December injunction against Internet Explorer 4.0 shouldn't exon of few cas

our Took, May 5, 1

--New York, Mary c. to

a powerful firm with a mody market posit

fall if it is not left alone by

Convent Street Human day 6, 1998, The Ot

arrest fine

61.345

But customers reaped one big Lawrence Lessig as a courtappointed "special master" to review technical issues in the dispute

February 1998; Eleven states begin to investigate Windows 98's inclusion of Internet Explorer. DOI probes whether links on the Windows desistop to Microsoft partners unfairly burts other companies

March 1998: Gates and other

crosoft to force it to in

The Back Page

Name to posder

y 2002, 10% of U.S. bouseholds will have a bouseholds will have a bound of the formester Research. In Cambridge, Mass. Those households will need a bub to te together the separate inhome networks used for computing, home automation and entertrainment devices.

wo juzors in a murder trial were dismissed after they searched the Internet for searched the Internet for prishly and brought their flidings into court deliberations. The Associated Press reports. A Roverside, Calif. Judge removed both panelists for misconduct. Juvors may consider only information received in court when deciding a defendant's fine.

ntelligence officials in the U.S. have identified the first known case of a terrorist cyberattack on a country's computer systems, Reuters reports. Ethnic Tamil guertillar, called the Internet Black Tigers, calmed the Junctillar of Serious de E-mail bombings' of Sri cide E-mail bombings' of Sri

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Spacewar, a pinneering computer game that ran on a
PDP-1 at MIT in 1962. The Web-based version, which is
faithful to the original source code, runs on a PDP-1
emulator implemented in Java (http://cx.www.media.
mit.edu/groups/el/projects/spacewar).

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Doich Computer Systems to have the first compitedly seeded, ultrarrapped portable computer for large department of the seeded of



Inside Lines

Simples, years, failed: long or attainment the lie this judge, Microsoft new pays Socie to callup profilement every time they meetine Microsoft profilete or promises they do. Profilement result if out a first in decreases the meetine, then the vendor off cot a check, Access tipe to a reput published that meetin in the Chronicol for Allel-Education, otherword officials bestead that the practice are fellow and decrease Tile an approximent Ye a relatively meefitness and decrease Tile as a possible connect Ye a relatively meeting.

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Microsoft anderess regulari

for Michin, a union vice provident at Microsoft, said but vanish and their Walders Wife you came out— without or the course out— — intermed with the gaining on a yearly 187 enhance cycle. "They are you at the supple resistant. Since may be resister. Allethin using an authors at Carlone Councy's Walders ATT Washing conference and work." The said part is that if I'v been almost your short there's being a market pack. I think their unicompatible. "And form the resistant of the marketing think it'v assembledly, then

Dick Armey: Merry Prantstar

Congruence Dick Josep D'Amen Joined the Microelle effects for you had on the Joined greaters purely later made to loo the E came from the justice Department. The later models the partice Department's state on Microelle as an attack one of more partice Department, the "advising temestates that it that he would "famoustates, but," advising temestates that it that he "which from intendeding may may product that the custome right what to practices." It was signed by "WIB Models, softenment efforts."

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The lampions beard associated in Employment of the many year spike from for the crosses of many model to come trades to people who already are restricted from being again trades to people who already are restricted from being again convenient in highly repulsable Little American countries. En year their mod carrier manner Tail one comment trades who attended many manifest in his Prof. on a comment profess who attended manifest in the Two the expension by historical and Cod "Looks This show's a big market for noting easy professor convolute tools."

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ad about the end of Sentfeld's num? Phil Eoster, a technology intelligit at Confessord Line in Doller, said he has a suggestion for programmers severpheter — based on the Mirror programmers are proposed to the consultation of the consultation of

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